Understanding Participation in Passion-Centric Social Network Sites

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Submitted in total fulfilment
of the requirements of the degree of
Doctor of Philosophy

May 2011

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Abstract

Passion describes a strong inclination towards an activity that people like and find important. It provides people with meaningful goals, facilitates personal development, and enriches their social lives. On the other hand, passion can be a source of tension with other areas of everyday life, which demands sacrifices, risks, and sometimes even suffering.

The aim of this thesis is to explore the relationship between technology and passion. In particular, this thesis addresses a gap in our understanding of participation in social network sites designed to support people's passions. While related work indicates the potential of passion-centric social network sites to enhance passion, little is known about how participation in these sites may complicate or otherwise influence passion.

I conducted three empirical studies to address this gap. Study 1 and 2 examined bodybuilding and the social network site BodySpace, whereas study 3 focussed on analogue photography and Flickr. In all three studies I used a field research approach to examine passion and participation in social network sites as well as related offline settings. Study 1 identified three different categories of online participation: tool, community, and theatre. These three categories showed how passion-centric social network sites both support and constrain the development of skills, social relations, and identities related to passion. Study 2 expanded on these findings, showing how online participation and passion vary between amateurs and related professionals. Study 3 evaluated the findings from study 1 and 2 in a different context. This study refined earlier findings on participation and its influence on passion, and it showed which of these findings are applicable to different domains.

Through these studies, this thesis contributes to current research in three distinct, but interrelated ways. First, the findings extend existing models of online participation by showing variations between the different categories of participation of amateurs and professionals. Second, this thesis extends current understanding of social relations on passion-centric social network sites by showing how and why users connect with different kinds of strangers as well as with groups of friends and peers. Finally, this thesis extends current understanding of passion in the context of social network sites. While existing sites support people in achieving their goals, they appear limited in mitigating sacrifices and risks, and thus they may adversely complicate passion. This thesis discusses practical implications emerging from these findings that address this challenge. It concludes with a call for novel technologies to mitigate sacrifices and to facilitate harmonious passion.

Declaration

This is to certify that

  i. the thesis comprises only my original work towards the PhD except where indicated in the Preface,

  ii. due acknowledgement has been made in the text to all other material used,

  iii. the thesis is less than 100,000 words in length, exclusive of tables, maps, bibliographies and appendices.

Bernd Ploderer

16 May 2011

The following is a list of peer-reviewed publications arising from the time of my candidature. All publications are attached in appendix D.

Ploderer, B., Howard, S., Thomas, P., & Reitberger, W. (2008). "Hey world, take a look at me!": Appreciating the human body on social network sites. In *Proceedings of the Conference on Persuasive Technology (PERSUASIVE 2008)* (Vol. 5033, pp. 245-248). Berlin: Springer.

Ploderer, B., Howard, S., & Thomas, P. (2008). Being online, living offline: The influence of social ties over the appropriation of social network sites. In *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2008)* (pp. 333-342). New York: ACM.

Ploderer, B., Wright, P., Howard, S., & Thomas, P. (2009). "No pain, no gain": Pleasure and suffering in technologies of "leidenschaft". *Interactions, 16*(5), 6-11.

Ploderer, B., Howard, S., & Thomas, P. (2010). Collaboration on social network sites: Amateurs, professionals and celebrities. *Computer Supported Cooperative Work (CSCW), 19*(5), 419-455.

Acknowledgements

This thesis would not have been possible without the generous support of the bodybuilders and photographers who donated their time to my research. They inspired me to live more healthily and I have thus developed my own passion for film-based photography.

I am forever in debt to my supervisors and advisory board members Steve Howard, Peter Thomas, Martin Gibbs, and Graeme Shanks for their outstanding support. Their sometimes-differing perspectives challenged me to find my own path. At times, they gently pushed me out of my comfort zone and encouraged me to take risks, while continually providing me with inspiration, guidance, and encouragement. Paul Dourish and Peter Wright offered me an academic home during my travels and made invaluable suggestions to this research.

The Department of Information Systems at the University of Melbourne provided me with an inspiring and supportive environment for my research. I would like to thank the IT team and the admin team for their ongoing support. I am grateful to my colleagues in the Interaction Design Group who helped me to complete this work, and in the course of it, became very close friends. Peter Benda, Joji Mori, Mitchell Harrop, Tuck Leong, and Shawn Ashkanasy have been immensely supportive. Besides sharing the experiences of pursuing a PhD, they have helped me to settle in Melbourne and engaged in both intellectual and often not so serious discussions. I would like to thank in particular Tuck Leong, for his guidance and for our close friendship, even over a distance, and Shawn Ashkanasy, for being a constant source of inspiration and support in so many parts of my life.

Other friends include Wolfgang Reitberger, who encouraged me to move to Melbourne and has remained a loyal friend, Peter Kubas, who helped me stay fit (and sane) throughout the years, and Eric Orton, Jared Winton and the Melbourne University Renegades Volleyball Club, who supported my own passion and helped me make friends in my new home. I am particularly grateful to my partner Lisa Ryan. Despite my unrelenting schedules, my changeable moods and concerns, she has been by my side to support and encourage me.

I am immensely thankful to my family in Austria. They have remained close and supportive in spite of the large distance and the idiosyncrasies of Internet telephony. I am particularly indebted to my mother Anna Ploderer, who has always encouraged my thirst for knowledge. Her selfless support has given me the opportunity to study, live overseas, and in the course of it, learn a little bit more about myself.

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Chapter 1

Introduction

1.1 Background

This research concentrates on a specific kind of technology: social network sites that are designed to connect people with a shared passion. Passion plays a significant role in people's lives. It describes an inclination towards an activity that people find important and, as a result, invest time and energy in (Vallerand, 2010; Vallerand et al., 2003). Beyond that, passion is important to people's social lives. It facilitates relationships with others who engage in the same activity, who can also relate to the effort invested into it, and who can appreciate the outcomes and achievements. People identify themselves through their passion and the social groups around them. For example, the participants in the first two studies presented in this thesis identified themselves as competitive bodybuilders, whereas the third study focussed on a group of photographers who used traditional, film-based techniques and equipment. Overall, passion strongly shapes how these people spend their time, how they feel about themselves, and how they relate to others. Thus, some psychologists and philosophers regard passion as that which makes life most worth living for (Robinson & Aronica, 2009; Solomon, 1993; Vallerand, 2008).

Passion has many positives, but it can also be a source of tension, risks and sacrifices, and for some it can turn into an obsession. This dual nature of passion and obsession is very dramatically illustrated by an incident that occurred in a bodybuilding competition during the fieldwork of the second study. Bodybuilding comprises all the positive aspects discussed above, yet during a visit to a bodybuilding competition I observed the collapse of an amateur competitor while posing on stage. At first sight it appeared like a person fainting due to dehydration and exhaustion, but it later became apparent that it was a serious heart attack. Support staff and audience members resuscitated the person. Soon after, the ambulance arrived, treated him and brought him to hospital. When the competition continued it was

announced that the competitor was in a serious but stable condition. Like everyone else in the audience I remained concerned. In the days after the event I searched for more information online, and I read on a discussion forum that the competitor had had a second heart attack and died in hospital. I also found condolences, personal stories of people who had known the competitor, and discussions of the risks of bodybuilding. These discussions rightfully pointed out that a heart attack could happen during any activity, like running a marathon, doing office work, sailing, or while watching a game of basketball. These discussions did not acknowledge though that the person had already had a heart attack prior to this event. Presumably, the person knew that a physically demanding activity like bodybuilding constitutes a risk for the heart, nevertheless he decided to go ahead with the preparation for a competition. This incident may seem like an extreme example, but most sports involve a risk of being injured. In addition, sports and creative activities alike can cause tension with other areas of everyday life due to the time and costs involved.

In sum, passion plays a significant role in people's lives not merely because of the positive aspects but also because of its dual nature. It both enriches and complicates people's lives, and it requires careful balance with other activities.

1.2 Problem

The duality of passion and obsession is significant for the field of human-computer interaction (HCI) because it provides opportunities and challenges for the design and study of technologies. Technologies can support people in their passion activities, yet the same technologies also play a potential role in amplifying risky activities, tensions, and sacrifices. The above-discussed example of the collapsed bodybuilder indicates how people appropriate existing technologies like web-based discussion forums to share information, personal experiences, and opinions on the risks of passion (or the lack thereof). However, it is unclear how such web-based services influence passion, whether they encourage people to take up a passion or to take it to the next level, whether they help people to better judge the risks inherent in an activity, or whether the opposite is the case and risk taking is further encouraged.

The question of the influence of technology use on passion is at the core of what boyd[1] and Ellison (2007) call 'passion-centric social network sites'. In their seminal paper on social network sites, boyd and Ellison (2007) stated that next to large social network sites, like Friendster, MySpace, and Facebook, many smaller social network sites also exist that are designed to connect people with a shared passion. They concluded their review of existing research on social network sites, asserting "a limited understanding of who is and who is not using these sites, why, and for what purposes, especially outside the U.S", and they called for more work because "such questions will require large-scale quantitative and qualitative research" (boyd & Ellison, 2007, p. 224).

The work of boyd and Ellison's provided an important stimulus for this research. This thesis focuses specifically on passion-centric social network sites to develop an understanding of how participation in these sites influences the positive aspects as well as the risks and sacrifices related to passion.

1.3 Aim and Scope

The aim of this thesis is to examine how participation in social network sites supports, enhances, complicates, or otherwise shapes passion. The understanding developed in this thesis is particularly concerned with passion-centric social network sites. Social network sites like Facebook and MySpace may also facilitate passion, e.g., MySpace's success is in parts attributed to its popularity in the music scene (Beer, 2008a). However, MySpace has a much broader purpose of connecting people across various social spheres like family, friends, work, and leisure activities, whereas this thesis focuses only on those social network sites that are designed to support a particular passion activity.

Further, this thesis focuses only on users of passion-centric social network sites who are passionate about what they do. Passion-centric social network sites get used by people with varying degrees of involvement in an activity, some with a mere interest only, some who casually engage in an activity, and some who exhibit a passion for an activity. These groups differ in the time and energy they invest into an activity, in their identification with it, and in the potential sacrifices and risks they take into account. The boundary between mere interest,

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[1] danah boyd writes her name in lower case, as discussed on http://www.danah.org/name.html.

casual engagement, and passion may be subjective, yet each group presented in this thesis had its own principles for drawing a boundary between passionate users and other groups.

Finally, I will focus only on one particular notion of passion in this thesis, namely passion as an inclination towards an activity (Vallerand, 2010). The term passion has many different vernacular meanings. For example, the Oxford English Dictionary (Passion, 2010) refers to passion in a Christian sense to describe the suffering of Jesus on the cross. It also describes passion as very strong emotions or intense sexual love, and similar to this thesis, it defines passion as an intense enthusiasm for something. Also within the scope of passion as an inclination towards an activity, this thesis focuses on actual engagement in an activity rather than being a mere fan. For example, the bodybuilders in this thesis visited bodybuilding shows to support other competitors and, likewise, the photographers visited exhibitions of other artists. However, at the same time these people were also actively competing and taking photos, respectively, which distinguished them from pure fans. Using the words of a study participant, this thesis focuses only on people "who walk the walk rather than just talk the talk".

In summary, passion in the context of this thesis stands for active engagement in an activity that is important and enriches a person's life, but it also involves risks and sacrifices. The aim of this research is to examine how participation in passion-centric social network sites influences such passion.

1.4 Overview of the Thesis

Chapter 2 reviews the literatures relevant to this thesis. It starts by defining the key terms, and it provides an overview of related work on participation in web-based services. It contrasts participation in traditional online communities with social network sites, and it shows the similarities as well as the differences of passion-centric social network sites to online communities and other social network sites. Finally, the literature review elaborates on the concept of passion. It looks at the discourse on passion in philosophy, provides a definition of passion as an inclination towards an activity, and contrasts this definition with related theories on interests, communities of practice, and serious leisure activities.

The critical review of related literature in chapter 2 shows that while case studies of participation in passion-centric social network sites exist, there is a limited understanding of participation in passion-centric social network sites that applies to different groups of users

and different sites. Furthermore, there is a limited understanding of how passion-centric social network sites influence not only positive aspects of passion but also how they shape the associated risks, tensions and sacrifices. Chapter 2 concludes with the overall research question and the three sub-questions that guided the three studies of this research in order to:

1. Develop a holistic understanding of participation in passion-centric social network sites

2. Examine the influence of participation on the development of passion

3. Compare participation and its influence on passion between different passion-centric social network sites to increase the applicability of the findings

Chapter 3 describes the research design. The chapter starts by reiterating the research questions. It explains why I aligned my research with an interpretivist perspective to address these research questions and discusses the underlying assumptions that guided the conduct of my field research and my evaluation of the findings. The interpretivist perspective also narrowed down the choice of methods reviewed in this chapter. Chapter 3 ends with an overview of the design of the three studies presented in this thesis. The study design lays out the requirements for choosing a case in each study, and it justifies the choice of methods to collect and to analyse data in order to address the research questions.

In chapter 4 the first study is presented. It starts by breaking down the first research question into several sub-questions that guide the empirical research. Based on the requirements laid out in chapter 3, chapter 4 discusses the case chosen for this study—Australian bodybuilding on BodySpace—followed by a description of the procedures used to collect and analyse data. The findings of study 1 describe three categories of participation in passion-centric social network sites: tool, community, and theatre. These categories illustrate how passion-centric social network sites both enhance and delimit passion. The discussion shows how the findings support and divert from related work on social network sites. It also provides a critique of the findings, and it highlights open issues like the differences in online participation between amateurs and professionals, which led to study 2.

Chapter 5 describes study 2, which follows up on the differences in online participation between amateurs and professionals. This chapter starts with an overview of the research questions guiding study 2. It provides the rationale for continuing the fieldwork with BodySpace users in California and describes the data collection and analysis. The findings build on the different categories of participation discovered in study 1 (tool, community, and theatre). Study 2 extends these findings by highlighting four different groups of users from

beginners to celebrities, and by illustrating the different benefits and limitations of passion-centric social network sites for these groups. The discussion relates the findings to theories and studies of amateurs and professionals to explain the differences between the four groups as well as the shift from participation in passion-centric social network sites to offline settings as people develop from beginners to celebrities. The chapter closes with a critique of the study and a summary of the contributions of study 1 and 2.

Study 1 and 2 developed an understanding of online participation and its relation to the development of passion. The aim of study 3 was to compare these findings from BodySpace with a different passion-centric social network sites to evaluate their applicability, which is described in chapter 7. Based on the research questions and the requirements laid in chapter 3, chapter 7 describes the choice of a photography club on the passion-centric social network site Flickr. Next, the chapter describes how I collected and analysed the data. The findings describe different kinds of relationships users establish on Flickr and how they influence the development of passion and related online participation. The discussion of chapter 7 shows how the findings regarding the different kinds of relationships support and divert from previous work on social network sites. Furthermore, the discussion examines the similarities and differences between study 1, 2, and 3 to illustrate which findings can be applied to different settings and which are unique to each study setting, and it explains why the similarities and differences may have occurred.

Chapter 8 concludes this thesis. It draws together the findings regarding passion and participation in social network sites. I will address the research questions by discussing the various categories of participation discovered in this research (tool, community, and theatre), their influence on the development of passion (from beginner to celebrity), as well as the relationship between different types of relationships, participation, and passion. This chapter details the contributions of this thesis to current understanding of participation, social structures, and passion on social network sites, and their practical implications for the design of web-based services. Limitations of the overall research process are discussed together with recommendations of how improvements could be made. This chapter provides suggestions for future work, highlights recent trends in social network sites for passion, and concludes with remarks on the untapped potentials of existing social network sites for passion.

Chapter 2

Review of Related Work on Passion and Participation in Social Network Sites

2.1 Introduction

The previous chapter introduced the problem and the aim of this research. It showed that passion enriches but also adversely complicates people's lives. This dual nature of passion provides opportunities for the design and study of technologies, but it also inherits a risk that technologies may further enhance tensions and complications caused by passion. The aim of this research is to examine how existing technologies, in particular social network sites, support, complicate, or otherwise shape passion.

This chapter provides a critical review of related work on social network sites and passion. Based on a synthesis of related theories and empirical studies, this review will establish two gaps in current understanding. Existing work lacks an understanding of participation that is applicable to different passion-centric social network sites, and there is a limited understanding of the influence of online participation on the dual nature of passion.

This chapter starts with definitions of the key terms, followed by a review of related work. Section 2.3 discusses different perspectives of online participation with a particular focus on online communities. I will contrast online communities with social network sites in section 2.4, and with passion-centric social network sites in section 2.5. Section 2.6 will focus on the concept of passion and related theories, and I will close this chapter with the gaps and the research questions that guided the empirical research in this thesis.

2.2 Definitions

Participation denotes both an activity and being with others (Wenger, 1998). Accordingly, I use the term **online participation** to refer to the activities and the connections facilitated by web-based services, like social network sites, discussion forums, blogs, media-sharing websites, and instant messaging.

Online communities have similar characteristics as traditional notions of communities, like interactions between several people over a prolonged period of time (Rheingold, 2000), a common purpose and set of values (Thurlow, Lengel, & Tomic, 2004), mutual obligation and support (Maloney-Krichmar & Preece, 2005), and a hermeneutic relationship between personal identity and group identity (Spears, Lea, & Postmes, 2007). Whereas traditional notions of communities are typically based on a shared location, definitions of online communities place the emphasis on a common interest amongst its members (Ridings, Gefen, & Arinze, 2002; Willson, 2010).

Social network sites are defined as: "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (boyd & Ellison, 2007, p. 211). boyd and Ellison (2007) distinguish between different types of social network sites based on their purpose. **Friendship-driven social network** sites like Facebook and MySpace allow people to keep in touch with pre-existing social circles (Ito et al., 2009). **Professional social network sites** like LinkedIn and Beehive help people to maintain their professional networks and to collaborate with co-workers (DiMicco et al., 2008). **Passion-centric social network sites** are designed for specific purposes, like photography on Flickr, and "help strangers connect based on shared interests" (boyd & Ellison, 2007, p. 216).

Passion is defined as a "strong inclination toward an activity that people like, that they find important, and in which they invest time and energy" (Vallerand et al., 2003, p. 757). This concept of passion by Vallerand and colleagues (2003) distinguishes between harmonious and obsessive passions, depending on whether a person is in control of the activity and whether the activity is carried out in harmony with other areas of their lives. **Interests** also refer to predispositions towards activities and actual engagement (Hidi & Renninger, 2006), but they lack the personal importance and the risk of obsession that characterise passion.

2.3 Online Participation

This thesis examines participation in social network sites and its influence on passion. This section focuses on related work on participation across a wide range of web-based services, and I will focus on participation in social network sites in the following sections. As defined by Wenger (1998, p. 55), I use the term 'participation' in order to refer to "a process of taking part and also to the relations with others that reflect this process". In the context of online participation, activities and connections with other people are facilitated through web-based services, like social network sites, discussion forums, blogs, media-sharing websites and instant messaging. The combination of activities and social structure in online participation will remain a recurrent theme throughout this thesis.

In this section I will first discuss different levels of online participation, from the discovery of a new website to leadership on it. The second part of this section compares the genres of interest-driven and friendship-driven participation. This comparison will focus particularly on online communities around a shared interest, which I will contrast with (friendship-driven) social network sites in the following section.

2.3.1 Levels of Online Participation

The term online participation reflects a variety of activities, like posting a blog entry, tagging a photo, or moderating a group discussion. While some users actively add content to web-based services, there is also a large group of users that only consumes content from them. The following two models unpack different levels of online participation, from the discovery of a new website to committed leadership. These levels of participation apply to different kinds of web-based services, including social network sites.

First, Fogg and Eckles's (2007) 'behavior chain for online participation' describes three phases in the adoption of web-based services. As illustrated in figure 2-1, the first phase refers to discovery of a website. This phase includes learning about the services of the website, e.g., through messages from trusted friends and a first visit to the website. The second phase of 'superficial involvement' describes processes like signing up to a service and initial attempts to try out its functions. The final phase of 'true commitment' starts when users keep returning to a website, create content, and recommend it to other people. Fogg and Eckles (2007) provide little information about how they developed their model.

However, the three phases of their model provide a vocabulary to talk about different levels of commitment in online participation.
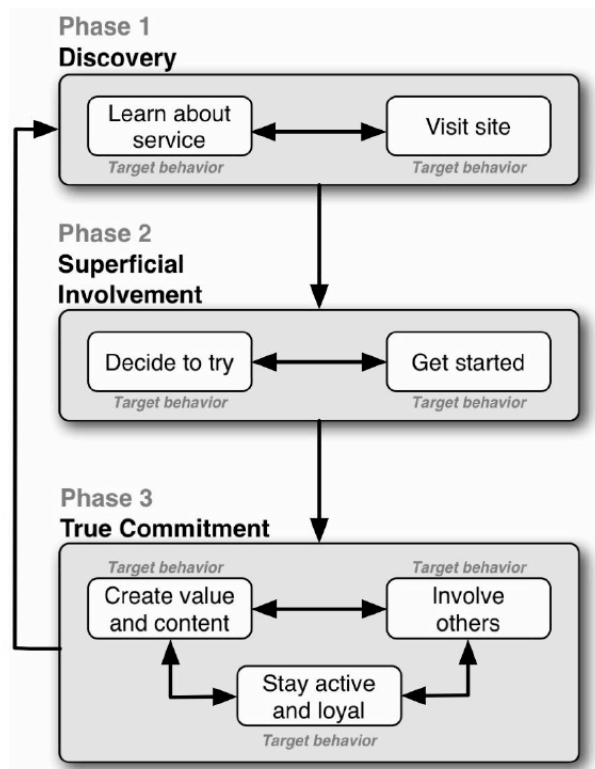
Figure 2-1: The behavior chain for online participation describes three phases in the adoption of web-based services (reproduced from Fogg & Eckles, 2007, p. 202).

Preece and Shneiderman's (2009) 'reader-to-leader framework' further expands on different levels of commitment in online participation. Figure 2-2 gives an overview of the framework, showing the different stages of activities from reading to leading and the transitions between these stages. The size of the arrows in figure 2-2 indicates that the number of users who transition from one stage to the next decreases gradually, and only very few users reach the final stage where they act as leaders. The arrows also indicate that users do not have to transition in a linear order. Although not shown in the image, people also end their participation for a variety of reasons.
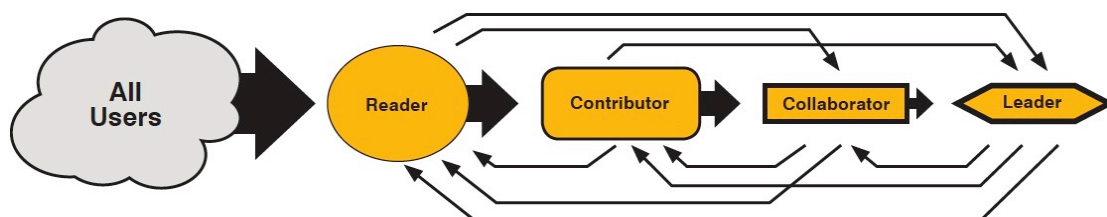
Figure 2-2: The 'reader-to-leader framework' describes different levels of participation in web-based services (reproduced from Hochheiser & Shneiderman, 2010, p. 65).

The four stages in the reader-to-leader framework provide an understanding of different kinds of online activities combined with different social needs. The first stage contains 'readers', who use websites to look up information. Readers are also described as 'lurkers' in related literature (Lampe, Wash, Velasquez, & Ozkaya, 2010; Panciera, Priedhorsky, Erickson, & Terveen, 2010; Preece, Nonnecke, & Andrews, 2004) to emphasise the lack of producing a visible contribution to a website. However, Preece and Shneiderman (2009) prefer the term 'reading' to emphasise this stage as a first step towards elongated online participation, both at the stage of reading as well as on another stage. The stage of 'contributor' marks a shift from reading towards adding content, like editing text on a wiki system, tagging images, or adding a comment on a blog. Previous work highlights the importance of recognition for people's contributions, because it helps users to establish a reputation on a website (Ling et al., 2005) and allows them to compare themselves with other users (M. Harper, Li, Chen, & Konstan, 2007). Preece and Shneiderman (2009) write that the second stage is closely connected to the third stage of 'collaborating', where two or more users work together, engage in a discussion, or share information. While recognition and reputation are important at this stage, Preece and Shneiderman (2009) also emphasise the importance of common ground between collaborating users as well as a sense of trust and altruism. Finally, 'leaders' are highly visible contributors. They synthesise information, mentor new users, and take on responsibility when problems or conflicts occur (Preece & Shneiderman, 2009).

Both the behaviour chain for online participation (Fogg & Eckles, 2007) and the reader-to-leader framework still require empirical evaluation (Preece & Shneiderman, 2009). Preece and Shneiderman (2009) also state that further work is needed to understand exogenous factors that influence online participation, like the importance of the topic as well as related offline activities and social connections. In the following subsection I will examine related work that focuses on the relationship between online participation and exogenous factors, i.e., how interests foster participation in online communities.

2.3.2 Genres of Online Participation

The behaviour chain for online participation (Fogg & Eckles, 2007) and the reader-to-leader framework (Preece & Shneiderman, 2009) focus on different levels of commitment to a particular website. Ito and colleagues (2009), on the other hand, distinguish between

'interest-driven' and 'friendship-driven' participation, which describe genres of participation that apply across a wide range of web-based services.

Interest-Driven Participation in Online Communities

Willson (2010) states that much of the early research on online participation was focussed on online communities based on a shared interest. Online communities share some similarities with traditional notions of communities, like interactions between several people over a prolonged period of time (Rheingold, 2000), a common purpose and set of values (Thurlow et al., 2004), mutual obligation and support (Maloney-Krichmar & Preece, 2005), an awareness of membership boundaries (Preece & Maloney-Krichmar, 2003), and a hermeneutic relationship between personal identity and the identity of the community (Spears et al., 2007). However, while traditional communities are generally defined by a shared geographic location, online communities are usually defined by a shared interest, like sport and recreation, pets, health and wellness, and professional activities (Preece, 2000; Ridings et al., 2002; Willson, 2010).

Ridings and Gefen (2004) explored why people join and participate in interest-driven online communities. According to their survey, the main motivation to participate in online communities is to exchange information. As shown in various studies of online communities across different interests, people benefit from information exchanged online in order to learn about new things (Torrey, Churchill, & McDonald, 2009). They create and innovate (Bardzell, 2007; von Hippel, 2005), share and assess one another's achievements (Grinter, 2005), and gain inspiration (Cook, Teasley, & Ackerman, 2009) and motivation for one's own activities and goals (Faulkner & Melican, 2007; Khaled, Barr, Noble, & Biddle, 2006). Studies of amateur communities further highlight that online participation is critical in order to establish the importance of a shared interest and to negotiate which challenges and goals are worthwhile pursuing (Bogdan & Bowers, 2007; Bogdan & Mayer, 2009; Grinter, 2005).

In addition to information, friendship and social support are important for participation in online communities (Ridings & Gefen, 2004). Social support refers to different ways of tacitly or explicitly helping one another, like finding ways to express concerns, empathising with one another's situation, and providing a sense of companionship and validation (Taylor, 2007; Wills & Shinar, 2000). Previous work highlights various benefits of social support exchanged online. The focus on a shared interest in online communities facilitates connections between people who find themselves in a similar situation. These people show empathy for one another's concerns and suggest ways to cope (Pfeil & Zaphiris, 2007;

Preece & Ghozati, 2001). Furthermore, online communities that support anonymous participation advantage people with marginalised identities. For example, people with diseases or a history as a prison inmate may find it easier to disclose their concerns and to find support online rather than in face-to-face situations (Tanis, 2007; Wright & Bell, 2003). Online communities may also have downsides, like hostile behaviour (flaming) and stalking (Amichai-Hamburger, 2007). Nevertheless, people develop friendships with other members of online communities based on ongoing online conversations and mutual support, and in some cases these online friendships also develop into offline friendships (Boase & Wellman, 2006; D. M. Carter, 2004).

Friendship-Driven Online Participation

While interest-driven online participation facilitates the development of friendships, Boase & Wellman (2006) argue that most online friendships are rooted in existing offline relationships. The day-to-day interactions with friends, peers, romantic partners, and family members on the Internet characterise the genre of friendship-driven participation (Ito et al., 2009). Friendship-driven participation occurs across a number of different web-based services, ranging from peer-to-peer interactions via instant messaging to group-based interactions on blogs and discussion forums. Ito and colleagues (2009) argue that friendship-driven participation, particularly amongst young adults in the USA, has become synonymous with participation in social network sites like Facebook and MySpace. I will review related work on participation in social network sites in the following section and contrast it with interest-driven participation in online communities.

2.4 Social Network Sites

The previous section showed that research on interest-driven participation often evolves around online communities, whereas Ito and colleagues (2009) argue that research on friendship-driven participation generally focuses on social network sites. This section will review related work on social network sites based on a seminal paper by boyd and Ellison (2007). boyd and Ellison's paper provides a widely used definition of social network sites. The paper argues that social network sites differ from online communities due to different relationships between their users. Furthermore, the paper provides a perspective on the history of different kinds of social network sites. In the following sections I will discuss the main arguments of boyd and Ellison's paper and relate them to recent work.

2.4.1 The Defining Elements of Social Network Sites

boyd and Ellison (2007) distinguish social network sites from other web-based services through three unique elements. First, social network sites allow users to craft their own profiles and to present themselves to others on the web through a combination of images and textual descriptions. boyd and Ellison argue that the profile is central for creating an identity online. Borrowing from Sundén (2003, p. 3), they argue that the profile allows a user to "type oneself into being" (boyd & Ellison, 2007, p. 211). However, recent developments on social network sites like Facebook and Twitter appear to diminish the central role of profiles. The Facebook 'news feed' accumulates in one spot status messages, comments, new photos, and other updates from other users. Hence, MacManus (2010) argues that people are less likely to visit profiles of other users.

The second defining element of social network sites is a publicly visible list of connections with other users. On Facebook and MySpace these connections are called 'friends', although they can comprise connections with a wide range of people including and beyond friends, like family members, colleagues, acquaintances, and complete strangers. Some social network sites use neutral labels like 'contacts' or novel labels like 'friendster' (boyd, 2004). However, these labels do not reflect differences between relationships, based on factors like a history of shared activities, loyalty, and trust (Allan, 1989).

Finally, these connections with other users are publicly visible on the profile and facilitate public and private modes of interaction on the social network site. Private modes of communication comprise emails and instant messaging on social network sites, whereas comments on a person's profile are usually publicly visible. Many social network sites allow users to restrict the visibility of comments and other profile information to contacts or other users only. However, the ongoing changes of Facebook from a rather private to an increasingly public setting have led to a public debate, which illustrates the significance of personal information on social network sites. One the one hand, profile descriptions as well as information about personal networks and their interactions are important for organisations that seek to commercialise it. On the other hand, the debate also highlights the concerns of social network site users, who fear the loss of privacy. It also underscores the importance of research on online privacy, i.e., on what kind of information people feel comfortable to disclose and their management of privacy settings (boyd & Hargittai, 2010; Gross, Acquisti, & Heinz, 2005; Stutzman & Kramer-Duffield, 2010).

2.4.2 Social Networks Sites Support Different Social Structures than Traditional Online Communities

> *"Early public online communities such as Usenet and public discussion forums*
> *were structured by topics or according to topical hierarchies, but social*
> *network sites are structured as personal (or ''egocentric'') networks, with the*
> *individual at the center of their own community. This more accurately mirrors*
> *unmediated social structures, where 'the world is composed of networks, not*
> *groups' (Wellman, 1988, p. 37)." (boyd & Ellison, 2007, p. 219)*

boyd and Ellison (2007) argue that social network sites support different social structures than traditional notions of online communities on discussion forums and bulletin boards (as discussed in section 2.3.2). The above statement highlights that social network sites focus on individuals and their personal networks, which suggests a dichotomy between the social structures of personal networks versus communities. boyd and Ellison adopt Wellman's view of 'networked individualism' (Wellman, 1988, 2001), which suggests a change in social structures from communities in a shared place towards individuals and their personal networks. Wellman argues that this change started before the Internet, but the Internet and other technologies facilitate connections between individuals and therefore support this change (Wellman, 2004). Willson (2010) states that personal networks and communities can be further contrasted through different kinds of relationships and interactions with others. Personal networks are generally characterised by heterogeneous relationships with different protocols for interactions, whereas communities generally suggest homogenous relationships, a common identity and culture, and shared norms for social interactions. Unlike Wellman (1988, 2001), however, Willson (2010) frames community and personal networks merely as different perspectives on understanding ways of being together (offline and online), rather than as actual changes in social structures.

Some studies have sought to leverage social network sites to facilitate interest-based online communities (Farnham, Brown, & Schwartz, 2009; Rosson, Carroll, Zhao, & Paone, 2009), However, research on social network sites has generally adopted the perspective of personal networks, in particular Granovetter's concept of weak ties (Granovetter, 1973, 1983). Granovetter characterises the strength of personal relationships (ties) as a "combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services" (Granovetter, 1973, p. 1361). Accordingly, Granovetter distinguishes between strong and weak ties. Strong ties describe relationships with close friends and family members, which are generally good sources for social support. Weak ties, on the

other hand, are usually known in specific and limited contexts, like at work or in a club. Their strength is that they provide access to a large variety of resources, like novel knowledge and networks (Granovetter, 1973, 1983). Previous work shows that social network sites support both strong and weak ties (Donath & boyd, 2004; Gilbert & Karahalios, 2009; Ito et al., 2009), but Donath (2007) argues that social network sites particularly benefit weak ties. Social network sites provide tools to establish connections, keep in touch, and exchange information. Moreover, social network sites add trust to weak ties because they place weak ties within a social context of friends that looks at the profiles and connections of weak ties and helps to verify their identity (Donath, 2007).

In addition to weak ties, previous research on social network sites has used the concept of social capital. Social capital broadly refers to the resources for action that accumulate from personal networks in different social contexts (Coleman, 1988). Putnam's concept of social capital distinguishes between 'bridging capital', which refers to links with weak ties that cut across different social contexts, and 'bonding capital', which refers to social support available from strong ties such as family members and close friends (Putnam, 2000). Surveys of different social network sites contest positive associations between social network site use and different kinds of social capital (Ellison, Steinfield, & Lampe, 2007; Steinfield, DiMicco, Ellison, & Lampe, 2009; Valenzuela, Park, & Kee, 2009). However, previous research also indicates that social network sites perpetuate inequalities in access to social capital between different populations, i.e., between people in urban and rural areas (Gilbert, Karahalios, & Sandvig, 2008).

2.4.3 Participation in Social Network Sites is Shaped by Offline Networks

The previous subsection showed that social network sites differ from traditional online communities, because social network sites focus on individuals and their personal networks rather than on communities with a shared interest. Building on this argument, boyd and Ellison (2007) argue further that social network sites are unique, because they support personal networks with offline connections. While online communities connect strangers, social network sites facilitate online connections between people who already know one another in person, because they are friends, relatives, classmates, club members, or co-workers.

*"Although exceptions exist, the available research suggests that most SNSs
primarily support pre-existing social relations . . . Given that SNSs enable
individuals to connect with one another, it is not surprising that they have
become deeply embedded in user's lives." (boyd & Ellison, 2007, p. 221)*

Several studies have looked at tertiary students and their participation in Facebook, partly
because Facebook was initially only accessible to students, and partly because students live
very social lives, often in new places and new social circles (Barkhuus & Tashiro, 2010).
Survey studies by Lampe and colleagues (2006, 2008) indicate that students use Facebook as
a surveillance tool to maintain lightweight contact with people they got to know offline,
rather than to search for strangers online. Joinson (2008) adds that Facebook helps students
to maintain an awareness of people in different locations with whom they may otherwise
lose contact. Qualitative studies by Barkhuus and Tashiro (2010) also emphasise the
relevance of a shared location for participation in Facebook. Their work describes how
Facebook helps students to get to know their peers better and to coordinate social activities
in an ad-hoc manner. Although much of the research has focussed on Facebook, studies of
other social network sites, like MySpace (boyd, 2008c), Cyworld in South Korea (Hjorth,
2007; Kim & Yun, 2007), and studiVZ in German-speaking countries (Fuchs, 2010), have
shown a similar integration of offline contacts and online participation.

Since social network sites serve as a surveillance tool to monitor one another, Joinson (2008)
points out that users are also concerned with the impressions they give to other users online.
The work of Goffman (1959) is seminal for understanding how people modify their
behaviour in the presence of others to convey a desired impression. However, social
encounters on social network sites are different from the face-to-face encounters
characterised by Goffman, because social network sites offer their users enhanced control on
what they disclose about themselves through their profiles and comments. Krasnova and
colleagues (2009) argue that the integration of social network sites with offline networks
ensures that people do not create a 'second self' (Turkle, 1995) that bears little resemblance
to their actual self. Instead, people use the enhanced control over their profiles to present an
"idealized projection of the real-life *'actual self'*" (Krasnova et al., 2009, p. 42). Toma
(2010) suggests that a selective and idealised self-presentation on social network sites as well
as connections with friends on these sites can provide a boost for a person's self-worth.
However, experimental studies show that the desired self-presentation can be diminished by
having too many friends (Tong, Van Der Heide, Langwell, & Walther, 2008) as well as by
having unfavourable photos and comments from friends on one's profile (Walther, Van Der

Heide, Kim, Westerman, & Tong, 2008). Furthermore, owners of profiles with overly idealised profiles risk being perceived as narcissistic (Buffardi & Campbell, 2008).

A further challenge for self-presentation on social network sites is the overlap of personal networks from different social spheres, particularly between work sphere and personal sphere. Skeels and Grudin (2009) argue that tensions can arise when people use Facebook to establish connections with co-workers and friends, or when they connect with co-workers across different hierarchical levels. Binder, Howes, and Sutcliffe (2009) suggest that tensions further increase when people are also connected to family members, because norms within families differ from norms within other social spheres. In contrast, Lampinen and colleagues (2009) argue that the presence of people from different social spheres on social network sites is unproblematic. Their qualitative studies unearthed various strategies to avoid conflicts, like choosing public and private communication channels and self-censoring. Similarly, DiMicco and Millen (2007) found that students adjust and delete information from Facebook when they transition from study life into work life. The management of different social spheres on social network sites, the strategies for self-presentation, and the findings on keeping in touch with others underscore that participation in social network sites is shaped by personal networks offline.

2.4.4 Different Kinds of Social Network Sites

The previous subsection illustrated that people generally participate in social network sites to interact with offline networks, but it also indicated that people use social network sites to interact with people from different social spheres like work and leisure. In their perspective on the history of social network sites, boyd and Ellison (2007) describe how social network sites evolved and diversified to address different work and leisure activities:

> *"While socially-organized SNSs solicit broad audiences, professional sites such*
> *as LinkedIn, Visible Path, and Xing (formerly openBC) focus on business*
> *people. 'Passion-centric' SNSs like Dogster (T. Rheingold, personal*
> *communication, August 2, 2007) help strangers connect based on shared*
> *interests. Care2 helps activists meet, Couchsurfing connects travellers to people*
> *with couches, and MyChurch joins Christian churches and their members.*
> *Furthermore, as the social media and user-generated content phenomena grew,*
> *websites focused on media sharing began implementing SNS features and*
> *becoming SNSs themselves. Examples include Flickr (photo sharing), Last.FM*

(music listening habits), and YouTube (video sharing)." (boyd & Ellison, 2007, p. 216)

The above quote discusses four different kinds of social network sites, which vary in the activities as well as in the social structures they support. In this thesis, I will adapt the suggested nomenclature for various kinds of social network sites in the following ways:

First, I will use the term 'friendship-driven' social network sites in this thesis to refer to websites like Facebook, MySpace, and Friendster, which connect people with their offline friends and other contacts. I prefer the term 'friendship-driven' suggested by Ito and colleagues (2009) to 'socially-organised' (boyd & Ellison, 2007), because it emphasises the central role of offline friendships and contacts on these social network sites, and it sets them more clearly apart from social network sites that support other social organisations, like at work. Furthermore, friendship-driven social network sites also support work activities (Skeels & Grudin, 2009), interest-based discussions (boyd, 2008a; Ellison, Lampe, & Steinfield, 2009; Kushin & Kitchener, 2009; Park, Kee, & Valenzuela, 2009), connections between artists and fans (Beer, 2008a; Suhr, 2009), as well as religious activities (Nyland & Near, 2007). Despite these different uses, people participate in passion-centric social network sites primarily to interact with their offline friends (Gilbert et al., 2008; Lampe et al., 2008).

So far this review has focussed on friendship-driven social network sites in English-speaking countries, but this kind of social network site appears to be successful across a wide range of countries. For example, Kim and Yun (Kim & Yun, 2007) write that Cyworld may have a larger social impact on South Korea than MySpace on the USA, because more than 90% of Koreans aged 24 to 29 are on Cyworld. Similar to MySpace and Facebook, people participate in Cyworld to interact with existing offline networks (Hjorth, 2007; Kim & Yun, 2007). Other international friendship-driven social network sites include Orkut in Brazil and India, QQ in China (boyd & Ellison, 2007), studiVZ in German-speaking countries (Fuchs, 2010), and Hyves in the Netherlands (Utz, 2009).

Second, I will use boyd and Ellison's term 'professional' social network sites in this thesis to refer to sites designed to support work-related activities. Professional social network sites like LinkedIn and Xing allow people to post their CV on their profiles and to maintain contact with their professional networks within and beyond their own organisation (Skeels & Grudin, 2009). The professional social network site Beehive[2] facilitates connections and

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[2] Beehive is an internal social network site at IBM also known as SocialBlue (IBM, 2011).

collaboration within IBM. Previous work shows that IBM employees use Beehive predominantly to connect with colleagues they already know in person, in order to get to know them better, exchange information, coordinate projects, and advance their careers (DiMicco et al., 2008; Steinfield et al., 2009; Wu, DiMicco, & Millen, 2010).

Finally, I will use the term 'passion-centric' social network sites in this thesis to describe sites that support a specific interest or passion. I will use this term also to refer to media-sharing services like Flickr and YouTube, because activities like photography or video production can equally be viewed as interests or passions. Passion-centric social network sites include the defining elements of social network sites (profiles, connections, and means for interaction). While friendship-driven social network sites and professional social network sites support interactions between people with offline connections, boyd and Ellison assert that passion-centric social network sites "help strangers connect based on shared interests" (boyd & Ellison, 2007, p. 216). This statement implies that passion-centric social network sites are different from other social network sites in at least two ways. First, participation in passion-centric social is driven by shared interests rather than by personal networks. Furthermore, these sites connect strangers rather than offline networks. In the following section I will review related work on passion-centric social network sites to examine these assertions.

2.5 Passion-Centric Social Network Sites

The previous section reviewed related work on social network sites. It indicated similarities as well as fundamental differences between passion-centric social network sites and other kinds of social network sites. Like other kinds of social network sites, those that focus on a shared passion inherit the defining elements of social network sites (profiles, connections, and visibility of connections and communication). They are also structured around individuals and their personal network. Unlike other kinds of social network sites, however, boyd and Ellison (2007) assert that shared interests rather than personal networks drive participation in passion-centric social network sites. Furthermore, passion-centric social network sites connect strangers rather than people with offline connections.

In this section I will review related work on passion-centric social network sites to examine boyd and Ellison's assertions. In line with the definition of participation as both activities and being with others (see section 2.3), I will discuss the activities as well as the social structures supported by passion-centric social network sites.

2.5.1 Activities on Passion-Centric Social Network Sites

In this section I will review related work on passion-centric social network sites to provide an overview of the interests and activities they support. Most studies focussed on sites that facilitate the sharing creative work, particularly via YouTube and Flickr, but I will also present case studies of passion-centric social network sites for various other activities.

Activities on YouTube

YouTube offers a popular platform for sharing videos as well as social network site features. Related work on participation in YouTube suggests that the website can be viewed as a passion-centric social network site that connects people with a shared interest and supports a variety of different activities.

First, participation in YouTube facilitates creative self-expression through videos. Ethnographic studies of amateur moviemakers show the dedication involved in the production of such videos as well as the intentions of sharing and self-expression (D. Kirk, Sellen, Harper, & Wood, 2007). Conversely, quantitative studies show that popular YouTube videos are largely professional productions or remixes of professional content (Cherubini, Oliveira, & Oliver, 2009; Kruitbosch & Nack, 2008). Kruitbosch and Nack contest a lack of creativity on YouTube and speculate that the "the process of creating something from scratch that is sufficiently polished for popularity on YouTube is too hard and tedious for most users" (Kruitbosch & Nack, 2008, p. 9). However, Lessig (2009) argues convincingly that remixing (professional) content is not a lack of creativity, but rather a way of actively engaging with other people's work, which requires an understanding of the original content and creativity.

Second, YouTube facilitates social interactions between moviemakers. Some people utilise comments and video responses simply to promote their videos in order to boost their rankings (Benevenuto, Rodrigues, Almeida, Almeida, & Ross, 2009). However, YouTube also supports the development of meaningful personal relationships. For example, Harley and Fitzpatrick's (2009) case study of a 79-year-old YouTube user illustrates how video sharing and commenting on one another's work provides opportunities for social contact across generations, as well as for reminiscing and reflecting on life events. Furthermore, ethnographic studies show how people manage their privacy in interactions with different audiences on YouTube (Lange, 2007a) and how YouTube users endure critical feedback and even hate messages if it means they can find new friends (Lange, 2007b).

Finally, participation in YouTube has also utilitarian purposes like exchanging information and learning. For instance, Blythe and Cairns (2009) discuss how people share information on YouTube in order to review novel technologies like the iPhone. Furthermore, several studies show how people learn to make movies through discussions and collaborative projects with other YouTube users (Harley & Fitzpatrick, 2009; Lange, 2007b).

Activities on Flickr

A second passion-centric social network site that has gained much attention by previous research is the photo-sharing website Flickr. Similar to YouTube, previous research highlights a variety of different activities on Flickr. People participate in Flickr to archive and to organise their photo collections. Hecht and Gergle (2010) indicate that Flickr users increasingly add geographic information to their photos, while Ames and Naaman (2007) illustrate how Flickr users utilise tags to organise their photos, remember related details, and beyond that, make their photos more visible to other users.

In addition to archiving photos, people participate in Flickr for various social reasons. Van House (2007) suggests that people use Flickr to stay close to people who may be physically distant. Flickr helps them to remain connected to friends and to present an image of themselves to them. Beyond that, van House (2007) indicates that people participate in Flickr to express their own work to the public and to view other people's work. Related work confirms this trend of self-expression via Flickr, and suggests that a large percentage of people participates in Flickr groups to connect with other users who share the same interest or location and who help them to develop their photography further (Cox, 2008; Negoescu & Gatica-Perez, 2008). While the connections with other users increase with a user's tenure in Flickr, the numbers of photos shared via Flickr decreases over time as people focus more on quality rather than on quantity of their images (Nov, Naaman, & Ye, 2010).

The research of Miller and Edwards (A. D. Miller & Edwards, 2007) provides two key insights for this thesis with regards to the meanings of participation in Flickr. First, it highlights that different kinds of photographers also differ in their approaches towards taking photos and their participation in Flickr. Casual photographers[3] tend to take photos primarily at important events, like birthday celebrations and on holidays, and they use Flickr as well as

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[3] Miller and Edwards (2007) use Chalfen's (1987) term 'Kodak culture' for casual photographers. Other sources use the terms 'snapshot culture', 'vernacular photography', and 'domestic photography' to describe casual photography (Cobley & Haeffner, 2009; Pink, 2007; Sontag, 1990; Wells, 2004).

email and prints to share these images with their family and friends. This group also expresses concerns about their privacy, and related work by Ahern and colleagues (Ahern et al., 2007) gives an overview of different strategies they use to manage their privacy on Flickr. In contrast to casual photographers, Miller and Edwards (2007) explain that amateur photographers on Flickr, who they call 'Snaprs', exhibit a more artistic approach towards photography. Snaprs use Flickr groups to establish connections with other users, to meet offline for photo walks, and to share photos with these connections and the Flickr community more widely. Although Flickr groups provide structure to groups of Snaprs, Miller and Edwards (2007) argue that the Snaprs are less formally organised than the amateur photography clubs observed by Grinter (2005). These findings highlight differences between user groups. However, Miller and Edwards (2007) concede that their findings apply only to a small fraction of Flickr users and may not generalise to the broader Flickr user base or to websites.

In addition to the differences between different user groups, the work by Miller and Edwards (2007) asserts an influence of Flickr on the offline activities of photographers. With regards to the offline meetings coordinated through Flickr they state that "the practices of Snaprs would likely not exist without the group structure Flickr provides for online sharing and offline activities." (A. D. Miller & Edwards, 2007, p. 354). This statement provides an example for the influence of participation in passion-centric social network sites on offline activities of passionate individuals, but it remains open how participation in passion-centric social network sites shapes passion across different kinds of activities.

Passion-Centric Social Network Sites for Creative Work

YouTube and Flickr have gained much attention by previous research, but several other passion-centric social network sites also connect people with a shared interest in creative work. Previous work on DeviantArt, a passion-centric social network site for artists and fans of digital art, indicates similar practices as on Flickr and YouTube. Artists use this website to exhibit their drawings, photographs, 3D game art, and flash animations. DeviantArt helps artists to gain visibility and feedback for their work and to develop relationships with other users (Comber, 2009). Scratch, on the other hand, is a passion-centric social network site and a platform for young people to develop, share, and examine animations and games. Studies of Scratch show similar practices as on DeviantArt, and they further highlight that the website administrators play a critical role in facilitating attention, because they select work that gets featured on the Scratch homepage (Resnick et al., 2009; Sylvan, 2010).

While passion-centric social network sites help individuals to present their work and to establish connections with peers, Humphreys (2008) also highlights complications in online participation. Her study of Ravelry, a social network site for knitters, spinners, and crocheters, shows how the issue of intellectual property complicates the exchange of creative work online. Amateurs use Ravelry as a resource to learn and to share patterns for free. However, professionals view such exchanges of patterns via Ravelry as problematic, because it potentially undermines their income. This conflict in Humphrey's work also provides evidence for different online activities between amateurs and related professionals.

Passion-Centric Social Network Sites for Other Offline Activities

In addition to media sharing and creative work, some work exists on passion-centric social network sites for activities like pet keeping, travelling, and political engagement. Catster and Dogster allow pet owners to create profiles for their pets. In this way they can connect with other pet owners without having to reveal their own identity online. Exploratory studies suggest that these websites help to mitigate social isolation from other pet owners in rural areas (Golbeck, 2009). However, this claim is based on the differences in the number of connections between rural and urban users, whereas Golder and colleagues (2007) argue that the number of connections on social network sites has little significance for the connectedness of people. The social interactions that occur via these links, like the number of messages exchanged between users, are a better indicator to judge connectedness on social network sites.

Studies of passion-centric social network sites for travelling and political engagement have also explored different aspects of online connections. Users of Essembly, a non-partisan social network site for political engagement, can choose between different kinds of connections. In addition to 'friend' for offline contacts, people can use the terms 'ally' and 'nemesis' to articulate connections with strangers who either hold similar or opposite political views. Not surprisingly, studies of social influence on Essembly show that users with offline contact and similar political views are more influential than strangers and those with different political views. Nevertheless, nemeses help users to filter out uninteresting content (Brzozowski, Hogg, & Szabo, 2008). Tan (2010) explored the mix of online and offline connections on CouchSurfing, a social network site for travellers. Users of CouchSurfing establish contact with strangers online in order to meet in person during their travels and to provide one another with hospitality. CouchSurfing provides mechanisms to evaluate other users after offline meetings, which helps other users to make rational

judgements before they meet offline. However, Tan (2010) argues that the leap of faith in meeting strangers is an essential part of the CouchSurfing experience. These studies of Essembly and CouchSurfing indicate that passion-centric social network sites support a mix of pure online and offline connections and that the interactions with these two kinds of connections differ.

Overall, previous work shows that activities on passion-centric social network sites vary widely between different passion-centric social network sites. As asserted by boyd and Ellison (2007), interests rather than offline networks drive participation in these sites. Although some similarities exist between activities on different passion-centric social network sites, like self-expression and information sharing, it remains unclear how widely these findings apply, both to different user populations on a single site as well as across different passion-centric social network sites. While this subsection already touched on social structures on different passion-centric social network sites, I will discuss this issue in further depth in the next section.

2.5.2 Social Structures on Passion-Centric Social Network Sites

The second assertion by boyd and Ellison's (2007) about passion-centric social network sites is that they support strangers rather than existing offline networks. In this section I will examine related work on YouTube, Flickr, and other passion-centric social network sites to show what kinds of social structures they support.

Previous work on YouTube indicates a variety of different social structures. Harley and Fitzpatrick's (2009) case study of an elderly person on YouTube characterises the social structures on YouTube as personal networks with strangers in different places and from different generations, which mitigate social isolation offline. Rotman, Golbeck, and Preece (2009), on the other hand, argue that their studies reveal a mismatch between personal networks and a sense of community on YouTube. Their study focussed on video bloggers who reported a strong sense of community on YouTube within groups with shared interests. These users developed intimate relationships with other group members as well as a sense of attachment to the group and its shared goals. Some video bloggers even identified themselves as 'YouTubers'. These interactions with others were predominantly online, but some people also met face-to-face to collaborate on video projects. However, Rotman and colleagues (2009) argue that the participants' reports about a community on YouTube were not reflected by the personal networks they had established online. Profiles, connections, and

comments on YouTube merely help people to enhance their self-presentation, but that they appear to add little to the formation of a community.

Studies of Flickr have come to different conclusions, giving preference to personal networks over communities. Previous work suggests that people use Flickr to share photos in order to keep in touch with their offline networks as well as to establish connections with strangers (Ahern et al., 2007; Ames & Naaman, 2007; Van House, 2007). Miller and Edwards (2007) point out that these different kinds of networks reflect different approaches to photography. Casual photographers tend to limit Flickr use to keep in touch with offline networks, whereas passionate amateur photographers focus on interactions with strangers.

Studies of other passion-centric social network sites for creative self-expression appear to support Miller and Edwards's (2007) observation that serious amateurs focus primarily on interactions with strangers (S. Humphreys, 2008; Sylvan, 2010). Furthermore, Comber's (2009) study of DeviantArt users unearths different kinds of connections with strangers. Comber distinguishes between 'sudden' one-sided connections with strangers who admire one's work, 'found' connections with those whose work one admires, and reciprocal 'built' connections with strangers that develop over time based on ongoing participation in the website's discussion forums. Unlike previous work on Flickr, Comber (2009) sees these relationships situated in the context in genre-based communities on DeviantArt.

Finally, studies of other passion-centric social network sites indicate a similar variety of social structures of online and offline networks with communities. Catster and Dogster appear to connect predominantly strangers (Golbeck, 2009), whereas users of the political passion-centric social network site Essembly can distinguish between 'allies' and 'nemeses' who they meet online, and 'friends' they know in person (Brzozowski et al., 2008). CouchSurfing frames itself as a community that allows people to establish personal networks with strangers online in order to meet them offline (Pultar & Raubal, 2009; Tan, 2010).

To summarise, the social structures on passion-centric social network sites appear to vary widely. Some studies showed that people use these sites to keep in touch with offline connections, similar to friendship-driven social network sites. However, several studies also indicated similarities with more traditional forms of online communities. These findings indicate that passion-centric social network sites sit somewhere between these two forms of online environments. Similar to the previous subsection on activities mediated by passion-centric social network sites, this subsection indicates that a broadly applicable understanding of how passion-centric social network sites support personal networks as well as communities online and offline appears to be missing.

In addition to these limitations in current understanding of participation in passion-centric social network sites, this section showed that the term 'passion' is not well conceptualised. Some studies provide detailed descriptions of the offline activities related to the interests (D. Kirk et al., 2007; A. D. Miller & Edwards, 2007). However, there is little discussion in previous work on passion-centric social network sites on what actually constitutes a passion, how it differs from an interest, and how passion is shaped through online participation. Hence, I will use the following section to review literature from the social sciences to discuss the concept of 'passion' and to distinguish it from 'interests'.

2.6 The Concept of Passion

The review of passion-centric social network sites highlighted a lack of discussion of the concept of passion. In their definition of passion-centric social network sites, boyd and Ellison (2007) use the term 'passion' interchangeably with 'interest'. I tried to elaborate on their choice of the term 'passion' for passion-centric social network sites in email conversations with both boyd and Ellison. Both iterated that they used the term as suggested in personal communications they had with Ted Rheingold, one of the founders of Catster and Dogster. Ellison pointed out the term 'interest' is more common in scholarly discussion (N. Ellison, personal communication, September 21, 2008). boyd suggested to further expand on the terms 'passion' and 'interest', and to mark why I use one term or the other (d. boyd, personal communication, September 19, 2008).

The following literature review discusses the concept of passion. I will start this review by providing a historical perspective of the concept, which highlights a duality, showing that passion can both enhance and seriously disrupt people's lives. This duality also applies to the specific concept of passion as an activity by Vallerand and colleagues (2003), which provided an important stimulus for my research. I will further discuss theories related to passion, i.e., interests, serious leisure and communities of practice, to highlight how they overlap and differ from passion. This comparison shows that the duality of enriching and disruptive elements sets passion apart from interests. However, the influence of social network sites on this duality is less well understood.

2.6.1 Dualistic Views of Passion

The term 'passion' holds a variety of different meanings. For example, the Oxford English Dictionary (Passion, 2010) provides three different definitions. First, it describes passion as "an intense desire or enthusiasm for something; the zealous pursuit of an aim". This first definition provides a useful starting point for this thesis on passion-centric social network sites, but the other two definitions highlight further key properties of passion. Second, the Oxford English Dictionary characterises passion as emotional or mental states, like a "strong, controlling, or overpowering emotion, as desire, hate, fear" as well as "strong affection; love". This view highlights an intensity of emotions as well as a dualistic view of passion as something with both positive and negative connotation. The third definition of passion as "senses relating to physical suffering and pain" amplifies this duality. The emphasis on suffering stems from its origins in the Latin word for suffering, 'passio', and its reference to the sufferings of Jesus from the Last Supper to his crucifixion (Solomon, 1993). In other languages the emphasis on suffering is still apparent. For instance, the German word for passion, 'Leidenschaft', explicitly contains the German word for suffering, 'leiden'.

Solomon (1993) argues that this dualistic view of passion as something intensely positive and negative is at the core of a longstanding philosophical discourse. Philosophers taking a rationalist perspective argue that passions are emotions that stand in opposition to rational behaviour and therefore cause suffering. This perspective is rooted in the work of Aristotle, who viewed passions as subservient to rational behaviour, and also the Stoics viewed passions like fear and lust as mistaken judgements (Solomon, 1993). Christianity developed this perspective further. For example, St. Augustine declared passions like vanity, sensual pleasure, and luxury as cardinal sins (Meyer & Barsky, 2000). Modern philosophers like Descartes further emphasised the importance of reason, and Kant even stated that passions are "pathological" in contrast to "practical reason" (Solomon, 1993, p. 10).

Romanticists took the opposite view, preferring passion over reason (Lazarus & Lazarus, 1994; Solomon, 1993). Solomon writes that Rousseau, the philosophical grandfather of Romanticism, argued to "trust natural sentiment, not artificial reason" (Solomon, 1993, p. 54). The ideas of Romanticism were most visible as a movement in the arts, vividly illustrated in works composers like Frédéric Chopin and Richard Wagner, painters like Eugène Delacroix and Caspar David Friedrich, and writers like Lord Byron and Henry David Thoreau. A central theme in their work is that passion gives our lives meaning. However, in emphasising the beauty as well as the suffering in passion, Solomon (1993) argues that Romanticism further perpetuated the dualistic view.

Contemporary philosophers like Solomon (1993) seek to move beyond this dualistic view of passion. However, Solomon's notion of passion as emotions is too broad for the purpose of characterising shared passion on passion-centric social network sites. In the following subsection I will present a narrower perspective of passion, albeit one that inherits the dualistic view of passion, suggesting that passion can be a positive as well as a detrimental force in our lives.

2.6.2 Passion as a Strong Inclination Towards an Activity

> *"Passion is defined as a strong inclination toward an activity that people like, that they find important, and in which they invest time and energy." (Vallerand et al., 2003, p. 757)*

The above definition of the term 'passion' by Vallerand and colleagues (2003) provides a useful stimulus for the examination of passion-centric social network sites. The focus on activities that are important and meaningful to people provides a much narrower focus than the various notions of passion as emotions and suffering discussed in the previous subsection. However, similar to other notions of passion, Vallerand developed a dualistic perspective that distinguishes between harmonious and obsessive passion (Vallerand, 2008, 2010; Vallerand et al., 2003).

The distinction between harmonious and obsessive passion depends on how the activity is internalised into one's identity. In both cases the activity constitutes a central facet of a person's identity. For instance, people with a passion for football describe themselves as 'football players' and also other people may refer to them in the same way. However, harmonious passion and obsessive passion differ in the process of developing such an identity and in the relationship between the passion and other aspects of a person's life. Vallerand and colleagues (2003) argue that harmonious passion stems from an autonomous internalisation into a person's identity, meaning that the person freely defines an activity as important without any contingencies attached to it. As a result, harmonious passion is important to people's lives, but it does not adversely affect other areas of their lives.

In contrast, obsessive passion becomes part of a person's identity due to external factors like interpersonal pressure, personal feelings attached to the activity like social acceptance and self-esteem, or an uncontrollable excitement arising from the activity. As a result, obsessive passion tends to dominate over other areas of people's lives and causes conflict with them. Furthermore, Vallerand and colleagues (2003) found that people with an obsessive passion

are less in control of their activity. They are more likely to experience negative feelings when they cannot carry out their passion activity. Furthermore, they are less likely to stop and give up an activity when it becomes detrimental to their wellbeing, as illustrated in studies of gambling (Skitch & Hodgins, 2005). Vallerand (2008) argues that passions only make life worth living if they are carried out in a harmonious way.

The differences between harmonious and obsessive passion have been supported by studies across various contexts, like sports (Vallerand et al., 2008), humanitarian work (Tassell & Flett, 2007) and entrepreneurship (Cardon, 2008). However, the development of passion remains an open issue. Based on a review of related work on passion, Vallerand (2008, p. 9) states "a first area of research that would appear important deals with the potential existence of stages of passion toward a given activity". Mageau and colleagues (2009) have started to explore stages of passion by examining the differences between novices, intermediates and experts in the context of musicians and athletes. Their survey results indicate that while talent is important, passion can be considered as a relationship that develops as people increasingly spend time on the activity and start to identify themselves with the activity. However, the authors concede that their findings are limited by the study design, and they suggest that their "findings would be strengthened if they were replicated using behavioral or observational data." (Mageau et al., 2009, p. 640). I will close this subsection by reviewing related theoretical perspectives that may help to illuminate how passion develops.

2.6.3 Theories Related to the Development of Passion

The following review discusses theories that guided the empirical work in this thesis, in particular to develop an understanding of how passion develops. The discussion of interests describes possible early stages of passion, whereas the serious leisure perspective highlights how passion can turn into professional careers. Finally, the communities of practice perspective shows the importance of the social context in the development of activities that represent a passion.

Interests as Early Stages of Passion

Hidi and Renninger define interests as a concept that "refers to the psychological state of engaging or the predisposition to reengage with particular classes of objects, events, or ideas over time." (Hidi & Renninger, 2006, p. 112). Like the above definition of passion by Vallerand and colleagues (2003), interests refer to activities or engagement. Unlike passion,

however, interests are generally not thought of as harmful or obsessive, and Hidi and Renninger's concept of interest contains no reference to its importance for a person. Therefore, passions can be viewed as a subset of interests that are important to a person and that are part of a person's identity.

Hidi and Renninger (2006) suggest a four-phased model to describe how interests develop from the initial spark to an activity maintained over time, which may ultimately turn into passion. The first phase of 'triggered situational interests' refers to interests that are sparked by stimuli in the environment, like conversations with other people or group activities in classrooms. Repeated triggers lead to the second phase of 'maintained situational interest'. The third phase of 'emerging individual interest' is characterised by a transition from external triggers to individual interest, where a person seeks opportunities to engage in an interest. The final stage of 'well-developed individual interest' refers to interests that a person maintains over time. The commitment and investments required for a passion indicate that not all interests can develop into a passion. However, the final phase of interests can be viewed as an early stage of a potential future passion.

Serious Leisure Perspective

Stebbins's serious leisure perspective describes the activities of serious amateurs and their interrelations with professionals in their domain (Stebbins, 1979, 1992, 2007). Serious leisure is usually based on regular activities of amateurs, hobbyists, or volunteers, which require skills, knowledge, and commitment. Unlike other forms of leisure that are more casual or short-lived, serious leisure activities occupy an important and permanent space in the lives of participants. Similar to Vallerand's (2008) notion of passion, serious leisure activities emphasise the importance of activities for a person and their identity. Furthermore, Stebbins (1979) writes that the work-like approach towards serious leisure inherits sacrifices, like being misunderstood and marginalised by the general public, even in popular activities like baseball and theatre. However, the serious leisure perspective is not characterised by the duality of harmonious and obsessive engagement.

The serious leisure perspective provides two key insights for the development of activities that may represent passions. First, Stebbins emphasises that serious leisure activities are usually characterised by personal development: "participants find a career in acquiring and expressing a combination of its special skills, knowledge, and experience" (Stebbins, 1992, p. 3). Second, activities and careers of amateurs are linked to those of professionals within the same domain. While professionals make a living from the activity, amateurs are

primarily motivated by their love for the activity and by rewards like being able to express themselves and validation from their peers. Amateurs generally derive inspiration from their professional counterparts. Stebbins (1979, p. 36) uses the term 'preprofessionals' to describe amateurs who view their leisure activity as a facilitator for a professional career, and conversely, 'postprofessionals' for people who remain active as an amateur after giving up their profession. Stebbins (1979) concludes that serious leisure activities are on the margin between work and leisure. Accordingly, passion may similarly be visible in the activities of amateurs and professionals.

Communities of Practice

The communities of practice perspective highlights the importance of the social and historical context of activities (Lave & Wenger, 1991; Wenger, 1998). Communities of practice are social groups defined by a shared activity rather than a shared location. The term practice connotes carrying out an activity and it also refers to the historical and social context of an activity (Wenger, 1998). For instance, photography as a practice refers not only to the act of taking images, it also suggests a connectedness to other photographers and the history of photography as an emerging medium for artistic, scientific, commercial, and documentary purposes.

Looking at activities in their social and historical context, Lave and Wenger (1991) emphasise that the development of activities relies on the acquisition of skills and knowledge as well as on establishing an identity within the community. In this context, identity refers to how a person views herself and how other community members view a person, and such an identity is established through "long-term, living relations between persons and their place and participation within communities of practice" (Lave & Wenger, 1991, p. 53). Learning takes place through active participation in the practices of a community, which fosters the development of skills and knowledge as well as the development of relations with peers and an identity within the community.

The communities of practice perspective describes the development of skills and identities as trajectories that develop over time (Lave & Wenger, 1991; Wenger, 1998). These trajectories have no fixed path and each person follows a different trajectory, yet they have some aspects in common. Newcomers to the community generally occupy places in the periphery of the community. While some newcomers may remain only peripherally involved in a community or even leave the community again, other newcomers become more involved in a community and progress towards more central locations through ongoing participation. Old-timers

occupy more central locations, yet their trajectories continue based on ongoing participation, which helps them to develop their identities further and to learn about new demands, inventions, and techniques in the domain.

The trajectories of old-timers can serve as role models for newcomers to illustrate what can be achieved within a community. Wenger (1998, p. 156) uses the term 'paradigmatic' trajectories to describe archetypical trajectories based on actual members of a community as well as composite stories. These paradigmatic trajectories shape the learning of newcomers by highlighting what is possible in a community, and by showing what counts in order to become a successful member. In summary, this perspective indicates that the development of activities that may represent a passion is an ongoing process that cannot be viewed separately from the social context in which they take place.

2.7 Identified Gaps and Research Questions

This chapter provided an overview of previous work on passion and online participation with a particular focus on passion-centric social network sites. In summary, passion-centric social network combine elements from other web-based services in novel ways. Similar to traditional online communities, passion-centric social network sites focus on common interests and facilitate connections between strangers. However, they also support networked structures and a focus on the individual, similar to other kinds of social network sites. Previous work on passion-centric social network sites indicates that they support a variety of different activities, both utilitarian and social, as well as different social structures, including communities as well as networks and with strangers and offline ties. Furthermore, some studies indicate that participation in passion-centric social network sites varies between different user populations (L. Humphreys, 2007; A. D. Miller & Edwards, 2007). While there are various partial accounts of participation in passion-centric social network sites, a comprehensive understanding of participation in passion-centric social network sites that accounts for different user populations and passion-centric social network sites with different social structures appears to be missing:

> **Gap 1:** Existing research indicates a variety of different activities and social structures on passion-centric social network sites, but it lacks an integrated understanding of participation in passion-centric social network sites that applies to different user populations and across passion-centric social network sites with different social structures.

This review further highlighted that existing work on passion-centric social network sites and passion is not well connected. Passion is defined as an inclinations towards an activity that people like, that they find important, and in which they invest time and energy (Vallerand et al., 2003). Activities that constitute passions have a central place in people's lives. They can make life worth living, but they can also turn into an obsession where they impede on other aspects of a person's life and diminish a person's wellbeing. Studies of passion-centric social network sites usually describe how online participation augments offline activities, like through access to people and knowledge (Harley & Fitzpatrick, 2009). However, discussions of how passion-centric social network sites complicate activities, like violations of intellectual property of creative work (L. Humphreys, 2007), are rare, and a comprehensive understanding of how online participation influences both harmonious passion and obsessive passion appears to be missing:

> **Gap 2:** Activities that constitute passions enrich people's lives, but they also posit risks and can turn into obsessions. This duality of passion may also be reflected in interactions on passion-centric social network sites, but there is a limited understanding of how online participation augments, complicates, or otherwise influences harmonious and obsessive passion.

The overall research question formulated to address the gaps in our understanding of passion-centric social network sites is:

> **Main research question:** How does participation in passion-centric social network sites influence one's passion?

While the above research question provided a generic aim for this thesis, I broke down the question into three sub-questions for the three empirical studies. The first sub-question addresses the first gap in order to establish an integrated understanding of the different types of participation that passion-centric social network sites support, including their benefits and limitations for passion-centric activities:

> **Research question 1:** What types of participation do passion-centric social network sites support?

The second sub-question seeks to examine how the different types of online participation facilitate the development of activities that constitute passions, and it therefore puts a stronger emphasis on the second gap. Besides examining the development of passion, this question also broadens our understanding of online participation to different user populations based on different stages in the development of their passion:

Research question 2: In what ways does participation in passion-centric social networks sites facilitate the development of passion?

The final research question aims to evaluate the findings regarding passion and participation in a different passion-centric social network site to broaden their applicability. This question places the emphasis particularly on social structures order to scrutinize boyd and Ellison's (2007) assertion that passion-centric social network sites connect strangers rather than people with offline connections:

Research question 3: Do the stages in the development of passion and the related types of online participation apply to passion-centric social network sites where individuals also have some form of offline connection?

Note

Although all research questions are presented here as a result of the literature review, they also evolved through the empirical research in this thesis. The initial literature review highlighted a lack of understanding of the relationship between passion and participation in passion-centric social network sites and a need to further explore participation and the role of offline connections with other users. However, research question 2 grew out of study 1 in order to address outliers in the study data.

2.8 Conclusions

This chapter reviewed existing work on participation in passion-centric social network sites and the concept of passion. The review highlighted similarities between participation in passion-centric social network sites and online communities and other forms of social network sites, but it contested the lack of an integrated understanding of participation in passion-centric social network sites that applies to different user groups and different websites. Furthermore, the review highlighted that activities that constitute passions can be both harmonious and obsessive, but that the relationship between these two kinds of passion and online participation is not well understood.

I closed this chapter closed with a discussion of the research questions that address these two gaps in current understanding of passion-centric social network sites. In the following chapter I will describe my approach in the three empirical studies designed to address these questions.

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Chapter 3

Research Design

3.1 Introduction

The literature review in the last chapter highlighted that participation in passion-centric social network sites and its influence on passion are not well understood, and it ended with the research questions that guided this research.

The aim of this chapter is to outline the research design in order to address the research questions. In the following section I will recap the research questions (section 3.2) and I will then argue why they can best be answered based on an interpretivist perspective (section 3.3). After describing the assumptions inherent in interpretivism, I will review qualitative methods used in related work on online participation that can be aligned with the interpretivist perspective (section 3.4). Section 3.5 will give an overview of the study design of this thesis, justify the methods, and list the requirements for choosing social network sites and participants in each of the three studies.

3.2 Research Questions

The literature review in the previous chapter highlighted two related gaps. First, it illustrated that existing research lacks a comprehensive understanding of participation in passion-centric social network sites that applies to different user populations and different sites. Second, there is a limited understanding of how participation in passion-centric social

network sites augments, complicates, or otherwise influences harmonious and obsessive passions.

The second gap forms the basis for the main research question, which focuses on the influence of online participation on passion:

> **Main research question:** How does participation in passion-centric social network sites influence one's passion?

I broke down the main research question into three sub-questions, which collectively develop an answer to the main research question and also address the first gap—the limited understanding of online participation across different user populations and sites. These sub-questions start by establishing an understanding of online participation. The second sub-question builds on this understanding to explore the relation between online participation and the development of passion. The third sub-question sets out to evaluate the relation between the development of passion and participation in a passion-centric social network site with different kinds of connections between users.

> **Research question 1:** What types of participation do passion-centric social network sites support?

> **Research question 2:** In what ways does participation in passion-centric social networks sites facilitate the development of passion?

> **Research question 3:** Do the stages in the development of passion and the related types of online participation apply to passion-centric social network sites where individuals also have some form of offline connection?

I carried out three studies to address the three sub-questions and to provide an answer to the main research question. I will use the following section to discuss the theoretical perspective and related methodology that guided these three studies.

3.3 Theoretical Perspective and Methodology

Human-computer interaction (HCI) spans across multiple disciplines and, accordingly, offers multiple ways to address the above research questions. As recommended by Harrison, Tatar, and Sengers (2007), I will use this section to explicate the theoretical perspective that guided this research. Crotty (1998, p. 3) defines the theoretical perspective as "the philosophical stance informing the methodology and thus providing a context for the process and

grounding its logic and criteria." On the one hand, the theoretical perspective needs to be aligned with methodology, that is the strategy behind the choice of particular methods to collect and analyse data. On the other hand, the theoretical perspective (and therefore also the methodology) is linked to a particular epistemology, a theory of knowledge. The alignment of epistemology, theoretical perspective, methodology, and methods helps to ensure the soundness of the research process (Crotty, 1998).

Table 3-1: Overview of my research approach, guided by the structure of Crotty (1998).

Epistemology:	Constructionism
Theoretical perspective:	Interpretivism
Methodology:	Field research
Methods for data collection:	Fieldwork, i.e., online and offline participant observation, interviews, film and photo elicitation
Methods for data analysis:	Memoing and sensitised grounded theory approach

Table 3-1 provides an overview of the different levels of my research, showing the perspectives and methods I used. I will use this section to outline why I aligned my research with the interpretivist perspective and what the related assumptions were that guided my research. I will give an overview of methods used in related work on online participation in section 3.4, and I will justify the methods chosen for this thesis in section 3.5.

3.3.1 Interpretivist Perspective to Understand Passion and Participation

The aim of this thesis is to explore how people participate in passion-centric social network sites and its influence on their passion. Several authors in the area of online participation argue strongly for a social science approach to further explore social network sites. Preece and Shneiderman (2009, p. 25) argue that "the research methods of sociology and anthropology seem most relevant for developing an understanding of social participation", such as "observation, interview, and ethnographic strategies". Similarly, boyd and Ellison (2007, p. 224) point out a "limited understanding of who is and who is not using these sites, why, and for what purposes", and they call for "richer, ethnographic research on populations more difficult to access (including non-users) . . . to understand the long-term implications of these tools." These authors ask researchers to explore the meanings of online participation

from the subjective perspectives of the users of social network sites rather than from an abstract and objective point of view.

In line with the aim of this research and the suggestions from the aforementioned authors, an interpretivist perspective guided this research. Neuman (2006, p. 87) defines interpretivism as "one of three major approaches to social research that emphasizes meaningful social action, socially constructed meaning, and value relativism." The purpose of this research is to understand and to describe how meaning is constructed through activities and social interactions on passion-centric social network sites, the intentions behind online participation, the values surrounding it, and its outcomes and influences on passion. This purpose is fundamentally different from research guided by the other two major approaches to social research. Positivist research seeks to discover universal laws that offer control and predictability, whereas research in the tradition of critical theory seeks to emancipate people and facilitate change (Neuman, 2006). These perspectives go beyond the scope of understanding the relationships between passion and online participation, because this research neither seeks to facilitate change nor the discovery of abstract laws. Therefore, positivism and critical theory lend themselves less well for answering the research questions of this thesis than an interpretivist perspective.

Interpretivism emerged as a response to positivism, but it has developed into different theoretical perspectives like hermeneutics, phenomenology, and symbolic interactionism. As an umbrella term, however, interpretivism captures some common assumptions between the different perspectives, which also guided this research:

- *Knowledge is constructed in social processes:* Interpretivism is aligned with an constructionist epistemology, which is the view that all knowledge is "constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context" (Crotty, 1998, p. 42). Thus, this research focuses on the construction of passion through social interactions and other kinds of participation in passion-centric social network sites and related settings.

- *Multiple social realities exist:* In acknowledging that knowledge is created through social interactions, it follows that interpretivism holds the views that knowledge is subjective and that multiple social realties exist (Neuman, 2006). Accordingly, people have different ways of understanding passion and online participation, which may not support the abstract models of participation and passion reviewed in the previous chapter. Therefore, I will use an inductive approach to develop an understanding of passion and participation based on empirical data.

- *Naturalist methodology:* Interpretivist research, i.e., symbolic interactionist research, tends to study the aforementioned social processes in natural, everyday social settings, rather than in researcher-created settings (Crotty, 1998; Neuman, 2006). This research is based on a field research approach that combines interviews and participant observation in passion-centric social network sites and related social settings. This approach allowed me to observe how other people interact online, to experience for myself what it means to be a member of a passion-centric social network site, and to inquire how online participation and passion relate.

In the field of HCI, the above assumptions are most closely aligned with what Harrison, Tatar and Sengers (2007) call the 'third paradigm'. The first and second paradigm in HCI are based on an engineering and behavioural science perspective, respectively, and they view the interaction between people and technologies as something that can be optimised to be more efficient. The third paradigm, on the other hand, is based on a social science perspective. It shifts the focus towards understanding interaction its social context, which may be enhanced rather than optimised through design. Similar to the outlined interpretivist perspective, the third paradigm focuses on the construction of meaning through interaction, and it also argues for a naturalist methodology and inductive reasoning.

Despite the similarities, the third paradigm differs from my interpretivist approach in its perspective on culture. Harrison, Tatar and Sengers (2007) ground the third paradigm in phenomenology, which seeks to understand experiences directly and immediately before we attribute meaning to them through our cultural background. Therefore, phenomenology "treats culture with a good measure of caution and suspicion" (Crotty, 1998, p. 71). My approach was more closely aligned with symbolic interactionism, which views culture as an important aspect in understanding meaning-making processes. boyd and Ellison (2007) highlight that social network sites vary widely in their cultures. As a consequence, participation varies between different sites, as discussed in the distinction between friendship-driven, professional, and passion-centric social network sites. Accordingly, in my studies I sought to understand participation and passion in light of the cultures and values of the chosen passion-centric social network sites.

Methodological Assumptions Underlying this Field Research

The term 'methodology' describes the strategy in the choice of methods and their alignment with a theoretical perspective. As discussed in the previous subsection, the interpretivist

perspective guiding this research calls for a naturalist methodology. The methodology of this research can be best described with the term 'field research', which is an umbrella term for research in natural settings (Neuman, 2006). Field research refers to "the systematic study, primarily through long-term, face-to-face interactions and observations, of everyday life" (Bailey, 2007, p. 2), although Murthy (2008) points out that field research goes beyond face-to-face interactions and encompasses also online interactions. My field research approach was strongly influenced by ethnography, but I will not label it as such to avoid misinterpretations of my research due to the different meanings of ethnography in HCI.[4] Instead of engaging in a debate of what an ethnography is (and what not), I will use the more generic term 'field research' for my methodology and 'fieldwork' for my methods, and the following items explicate the assumptions that guided my field research:

- *Study of everyday life contexts online and offline:* As discussed above, interpretivism calls for a naturalist approach, which means that social processes like online participation are studied in everyday life (Bailey, 2007). The main settings of everyday life studied in this research are passion-centric social network sites, but they are not the only ones. Some qualitative researchers focus only on online interactions, arguing that the processes and phenomena they study are purely online (Boellstorff, 2008). However, this research focuses on online participation and its influence on activities that constitute a passion, which are carried out across a number of different contexts. As argued by Miller and Slater (2000), I hold the view that online participation can therefore only be understood in combination with related offline contexts. My methodology combines the study of participation in passion-centric social network sites with participation in other settings online and offline relevant to passion.

- *Triangulation:* Triangulation refers to the idea of looking at something from different angles to gain a more accurate perspective (Neuman, 2006). Field research often involves data gathering from different sources as well as through different methods (Moran-Ellis et al., 2006). For example, I sourced background information on the passions that I studied from documentaries, magazines, books, and websites.

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[4] Several researchers in the field of HCI have pointed out the misunderstandings between ethnography as a mere method to collect data as compared to ethnography as a methodology that is grounded in a theoretical perspective (Anderson, 1994; Dourish, 2006; Forsythe, 1999; Randall, Harper, & Rouncefield, 2007), as well as the misunderstandings between different theoretical perspectives (Crabtree, Rodden, Tolmie, & Button, 2009).

As I will outline in section 3.5, I also used different methods like interviews and participant observation during my fieldwork.

- *Structured yet flexible data collection:* For various reasons field research can be relatively unstructured. Methods generally do not follow formal procedures. Categories for interpreting the findings only emerge during the study. As a result, sampling is generally an ongoing process until the findings stabilise (Hammersley & Atkinson, 2007). Randall, Harper and Rouncefield (2007) acknowledge these challenges, but they urge researchers to seek a more structured approach. Section 3.5 will outline the structure of this research, yet I also allowed this research to be flexible to account for challenges and emerging opportunities. I will outline in chapter 4, 5, and 6 where I deviated from the original study design due to challenges like getting access to study participants as well as due to surprising findings.

- *Prolonged involvement:* Although field research in HCI is generally not as long as anthropological studies of foreign cultures, Randall, Harper, and Rouncefield (2007) write that also in HCI it will take some time to understand a setting and to gain a coherent view of the socio-technical processes under investigation. The length of involvement depends on the problem, and to a certain extent also to the level of involvement. While the researcher can take the role of a pure observer from a distance, particularly in studies on the Internet (Gobo, 2008; Kozinets, 2002), my aim was to become an active participant in passion-centric social network sites and to immerse myself into the related passion to gain the perspective of an insider. (I will describe my involvement in each study in section 4.4, 5.4, and 6.4, respectively)

- *Few cases in depth:* From the previous point it follows that field research generally involves only a few cases on a small scale in order to facilitate in-depth study (Hammersley & Atkinson, 2007). In field research, a case generally describes some sort of phenomenon in a bounded context (Miles & Huberman, 1994). In this research, a case refers specifically to a passion-centric social network site and related offline and online settings, and a chosen subset of users of this site with a clear passion. (I will outline the specific case requirements for each study in section 3.5). I kept the boundaries of each case narrow, which allowed me to examine each case in depth and to provide holistic descriptions of the people and their online participation, passion, and social interactions with peers.

- *Reflexivity:* Another point following from the prolonged involvement in a study setting is that the involvement of the researcher influences the people in the study

and vice versa. Therefore, Baym and Markham (2009) highlight the importance of reflexivity in field research. They command the researcher to explicate the values and interests that the researcher brings to a study and to reflect upon how these values may influence what is observed. Accordingly, all study chapters (chapter 4, 5, and 6) will contain accounts of my knowledge of an activity (or the lack thereof) and my and engagement in a particular passion-centric social network site prior to the study. I will discuss how my previous knowledge may have coloured my observations and also how my perception of the study settings changed in the course my research. Furthermore, I used also unobtrusive methods to mitigate my influence on the people I studied.

- *Qualitative analysis starts during data collection:* Analysis in field research is generally based on qualitative data, predominantly words, and it usually involves "interpretation of meanings, functions, and consequences of human actions" (Hammersley & Atkinson, 2007, p. 3). As implied in the theoretical perspective, the data allows multiple interpretations. For the most part, the analysis leads to explanations and abstract themes, which are grounded in rich and detailed descriptions of specifics (Neuman, 2006). Quantitative analysis plays a secondary role at most (Hammersley & Atkinson, 2007). Hammersley and Atkinson (2007) write that analysis is not a distinct stage of the research but generally starts early and feeds into the data collection or even the research design. Accordingly, the analysis of online participation and passion in this research relied primarily on qualitative data analysis and started early in the research process. The analysis produced abstract themes that illustrate different types of participation and their limitations. I used some numerical data in a descriptive manner, but I based my explanations predominantly on rich accounts of people's activities on passion-centric social network sites.

3.3.2 Criteria for Evaluating Field Research

In addition to the strategies for data collection and analysis, my field research approach also contained criteria for judging the quality of the findings and conclusions. While positivist research is usually evaluated by validity and reliability (Neuman, 2006), these criteria are less useful in field research with an interpretivist stance. As discussed above, interpretivism assumes multiple social realities and thus also findings can be interpreted in multiple ways,

which is contrary to the concept of truth encapsulated by validity. Similarly, the concept of reliability goes contrary to the assumption of an unstructured approach and the mutual influences between study participants and researchers. Instead, interpretivist research has its own criteria to judge the quality of findings. Corbin and Strauss (2008) provide an excellent overview of different criteria for judging qualitative research discussed in related literature. They also point out that different approaches under the umbrella of qualitative (interpretivist) research require different criteria. Following this advice, the quality criteria that guided this field research were:

- *Auditability*: Miles and Huberman (1994) suggest that the research process should be consistent over time and across researchers and methods, and above all transparent for readers. I strove for consistency through prolonged involvement in the study settings and through ongoing discussions of my study activities and findings with my thesis supervisors. Furthermore, I sought to enhance the transparency of my research by outlining the underlying assumptions in this chapter and by describing my research activities in detail in the study chapters and related appendices.

- *Credibility*: The concept of 'credibility' describes whether findings are trustworthy and believable to the readers of a research report as well as the people studied (Corbin & Strauss, 2008). Accordingly, all study chapters will provide rich descriptions of participation in passion-centric social network sites and the related passion, and they will also highlight areas of uncertainty and contradicting evidence. Furthermore, I integrated various 'member checking' techniques (Cho & Trent, 2006) into my research to ensure the findings reflect the views of the people I studied. For example, I discussed emerging findings in follow-up interviews with the participants and I sought their feedback on papers and chapter drafts to discuss my interpretation of the data with them.

- *Applicability*: Although the findings are grounded in specific settings, I strove for 'applicability' (Glaser & Strauss, 1967), i.e., findings that apply to different passions and social network sites. As I will outline in the study design in section 3.5, I examined participation in three different settings in order to compare findings between different user groups within a single site as well as between different passion-centric social network sites. In each study chapter I will summarise preliminary findings as assertions, and I will evaluate, extend, and refine them in the following chapters to gradually establish an understanding of online participation that applies to different settings. Furthermore, I will compare and contrast my

findings with other studies of similar settings to highlight how this research supports, extends, or diverts from previous work.

This section outlined the interpretivist perspective of this research and the assumptions embedded in my field research. In the following section I will review methods used in related research on online participation.

3.4 Review of Qualitative Methods Used in Related Work on Online Participation

This section provides a review of methods for data collection and analysis used in related work on online participation. I will leave out quantitative methods like surveys and statistical analysis, which stem from a positivist tradition and cannot be aligned with the interpretivist stance of my research. Instead I will focus on qualitative methods, which can be used to understand how people participate online as well as to unearth the intentions behind them and its meaning for people's passion.

While this section provides an overview of methods used in related research, section 3.5 will describe how I combined and adapted different methods to address the research questions in the three studies of this thesis.

3.4.1 Qualitative Approaches to Data Collection and Organisation

The following review contains methods used in related qualitative work on online participation to collect and to organise data for later analysis. The review starts with methods that require little or no work from the people studied, like participant observation, and it moves on to more interactive methods like interviews, photo elicitation, cultural probes and diaries,[5] which place more burden on the participants.

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[5] The distinctions between these methods are not always clear-cut, because the reviewed work stems from HCI as well as the social sciences and at times the terminology varies between these fields.

Online Data Collection and Participation Observation

Collecting data online provides an immediate way to study online participation. Social network sites provide a rich source of information of online participation in its natural setting, i.e., profiles, friend networks, and interactions with other users. Online data collection requires little or no additional effort from the people studied. It is generally less obtrusive than other methods reviewed in this section and therefore less likely to bias people (Hine, 2000; Murthy, 2008).

The studies reviewed in chapter 2 used a variety of different approaches under the label 'online data collection', which vary in terms of the quantity of information collected as well as the level of involvement of the researchers. Many social network sites offer public access to large parts of the online profiles of their users, their friend networks, and messages exchanged with other users. Large collections of such online data are not only used in studies with a positivist approach but also in interpretivist studies of online participation in order to contrast quantitative data with qualitative data collected through other methods (DiMicco et al., 2008; Rotman et al., 2009). On the opposite spectrum, qualitative researchers have also examined in depth rather small collections of online data like from a single user (Harley & Fitzpatrick, 2009) or a single discussion thread (S. Humphreys, 2008).

Beyond the differences in the quantity of data collected, qualitative researchers also work with different levels of involvement in the environments they study. As in Beer's studies of music fans on social network sites (Beer, 2008a), the researcher can take the on the role of a 'lurker' who observes and collects data over a prolonged period of time without actively contributing to the online setting. Other researchers take a more active stance in their participant observation. For example, in her studies of teens' use of social network sites boyd also became an active user of these sites herself (boyd, 2008c). While boyd acknowledges that she could not become a full 'native' in her studies of teens, she argues that crafting a profile and interacting on these social network sites is critical to gain similar experiences as a regular user of these sites (boyd, 2007, 2008c). Regardless of the level of involvement, Kozinets (2002) recommends combining collected online data collection with personal observations and interpretations in fieldnotes. Similar as in traditionally conceived participant observation, writing fieldnotes facilitates reflection and the development of analytic insight.

Social network sites provide convenient access for data collection data and participant observation, but simple access to data also raises ethical concerns. One main concern is the protection of the privacy of the people studied. Information may be publicly available on

social network sites, but ethical guidelines for Internet research tend to take a cautious stance and view such information as private and confidential. When feasible, they recommend asking for consent before any online data is collected. Furthermore, researchers need to anonymise all data and treat it confidentially throughout the research process (Ess & AoIR ethics working committee, 2002; Hookway, 2008; Markham, 2005). Kozinets (2002) further advocates that researchers who use online participant observation should fully disclose their presence, affiliations, and intentions to the people they study.

Despite the many advantages of online data collection and participant observation, these methods also have their limitations. As already highlighted by boyd (2008c), researchers may remain peripheral participants in the social network sites they study despite their active involvement in these sites. Consequently, researchers require other methods to interpret the meaning behind the activities they observe. Furthermore, pure online data collection does not allow the researcher to relate online activities to offline activities (D. Miller & Slater, 2000). Thus, the following methods will focus on ways to complement online participant observation in order to illuminate the meaning behind online participation and its relation to offline activities.

Offline Participant Observation

The purpose of participant observation is to observe activities and social processes in their natural settings, to experience them for oneself, and to describe them in fieldnotes (Emerson, Fretz, Shaw, & Thompson, 1996; Gobo, 2008). Participant observation allows for different approaches, depending on the researcher's relationship to the community under investigation and whether the research is covert or overt (Kawulich, 2005). In cases of covert research, the researcher takes on the role of a complete observer and carry out observations as an outsider without interfering in the activities of the study setting. If the researcher is a member of the community, then he or she can carry out the observation as a complete participant. In cases of overt observation, Kawulich (2005) distinguishes further between observer as participant and participant as observer depending on whether the researcher is a member of the community she studies or not.

Tan's (2010) study of the passion-centric social network site CouchSurfing illustrates the approach of a participant as observer. Tan had been a user of CouchSurfing prior to her research—she had used the hospitality of other users during her travels and she had also hosted other users in her own home. To explore how people develop trust in other users on the CouchSurfing website before they meet in person, she used a participant observation

approach where she observed the 'couch surfers' that she hosted in her home. Tan explicitly stated the research aims on her CouchSurfing profile, and with the consent of her guests she observed them and interacted with them to learn more about their perspectives on trust and their strategies in evaluating other couch surfers online.

Observations in the field are generally captured in fieldnotes, written during or immediately after visits to the field. Writing fieldnotes may seem to be a straightforward process of writing down one's observations, but Wolfinger (2002) highlights that fieldnotes are essentially selective in what they include and a trade-off between breadth and detail. The selection is often based on what the researcher finds important and interesting, which means fieldnotes are highly subjective and depend on the assumptions and tacit knowledge of the researcher. Fieldnotes can also be approached in a comprehensive manner, structured by sequences of events or by lists of concerns such as spaces, actors, and activities. However, even such comprehensive notes are selective, because not everything can be documented (Wolfinger, 2002). Since fieldnotes provide a selective interpretation of events and processes, they should also contain reflections on how these interpretations were made. Moreover, fieldnotes should contain the feelings of the researcher during the observation, because they may have coloured personal relations with study participants and observations (Coffey, 1999; Hammersley & Atkinson, 2007).

In summary, participant observation plays an important role in understanding social processes through observations of others and direct experience. However, the experience of the researcher is not the same as those of the people being studied. Thus, field researchers often combine observations with some form of interview to discuss their observations with the study participants. I will provide more details on interviewing in the next subsection.

Qualitative Interviews

Field researchers use qualitative interviews to gain access to information that cannot be observed, like the interpretation of events and social processes from the perspective of participants (Weiss, 1995). For example, boyd (2008c) used observations online and offline to understand the contexts where teenagers 'hang out' and socialise, and she used qualitative interviews to make sense of her observations. She interviewed teenagers to discuss their perspectives on issues related to socialising across different contexts, like how they establish an identity online, how they perceive risks to their privacy, and how they feel about conflicts arising online due to ambiguous features like MySpace's 'top friends'.

The study of boyd illustrates that qualitative interviews differ from survey interviews in several ways. While survey interviews generally produce information that can be quantified, qualitative interviews use predominantly open-ended questions to elicit descriptions, processes, and interpretations of events. Qualitative interviews are generally less structured, tailored to specific people and situations, and they can take the character of a friendly conversational exchange (Neuman, 2006; Weiss, 1995). In line with the interpretivist perspective outlined in section 3.3.1, Rapley (2001) reminds us that interviews are not merely responses to a set of questions but the result of a social process where researcher and participant together construct meaning.

Qualitative researchers carry out interviews in different ways and through different channels. Qualitative interviews can be distinguished between different degrees of structure, from semi-structured interviews based on interview guides to more open forms of interviews where only a general topic is known. Interviews can have specific purposes, like eliciting the life history of a person (Neuman, 2006) or discussing emerging findings with the participants through so-called 'member checking' (Cho & Trent, 2006; Roulston, 2010). Interviews can involve only one person or groups of people, as in Tufekci's (2008) focus group study of people who decide not to use social network sites. Furthermore, qualitative interviews can utilise objects and information available in the field. For instance, Miller and Edwards (2007) interviewed participants in front of their personal computers so that they could go through their practices of organising and sharing photos online on Flickr. Finally, qualitative interviews can be conducted through different channels. For example, Lange (Lange, 2007a, 2007b) interviewed people face-to-face as well as via telephone and instant messaging to learn about their participation in YouTube. Face-to-face interviews may be regarded the gold standard for interviewing, but Sturges and Hanrahan's (2004) comparison of telephone and face-to-face interview in qualitative research suggests that both kinds of interviews can lead to similar results. Furthermore, Hewson (2007) argues in favour of interviews carried out online because they are cost and time-efficient and less prone to bias due to the visual anonymity.

Usually qualitative interviews in the field get audio or video recorded for later analysis. Audio recordings are easier to set up and less intrusive, but they cannot offer the richness of video data. Video recordings provide a more complete sense of people and their environment, which can be shared with other researchers or played back and discussed with the study participants. Furthermore, video recordings bring back a vivid image of the interview during the transcription and analysis of the interview (Dufon, 2002; Heath, Hindmarsh, & Luff, 2010).

Transcribing interviews may appear like a straightforward process, but Hammersley (2010) points out different approaches in transcribing interviews. First, a decision needs to be made on the amount of detail in the transcript. For example, sociolinguists and conversation analysts require more detailed transcripts, including nonverbal elements, than other qualitative researchers. Furthermore, researchers need to decide whether they describe selectively, or whether they transcribe all interview material. Selective transcribing saves time, but it may be difficult to judge what is relevant when an inductive analysis approach is taken and findings emerge and change over time. Beyond that, Hammersley and Atkinson (2007) remind us that transcribing is an important part of the analytical process, which helps researchers to immerse themselves into the data and to generate analytic ideas.

Photo Elicitation and other Visual Methods

Several studies of the passion-centric social network site Flickr have integrated photos into their interviews to elicit discussion on people's online practices. Based on the so-called 'photo elicitation' method (D. Harper, 2002), these studies used photos chosen by the participants and by the researchers to discuss what kinds of images people take and share online (Van House, 2007), how they tag their images (Ames & Naaman, 2007), and how they manage their privacy online (Ahern et al., 2007; A. D. Miller & Edwards, 2007).

Photo elicitation studies utilise the ambiguity of photos to evoke discussion and reflection. Although photos can be viewed as objective records of the world, Schwartz (1989) argues that photos do not contain a fixed meaning. Ethnographic studies of photo uses in families show that stories are not told by photo albums but rather people use photos to tell stories about holidays, birthdays, and other significant events (Chalfen, 1987). Photo elicitation taps into these storytelling skills, and researchers gain insights through people's responses to photos rather than through photos themselves (Schwartz, 1989). Pink (2007) stresses that photo elicitation does not merely capture the interpretation of the participant. Like in any other interview, researcher and participant discuss their different understandings and they co-construct new interpretations. According to Harper (2002), the advantage of photo elicitation to purely verbal interviews is that photos stimulate different parts of the brain than words do, and therefore photo elicitation evokes different kinds of information and deeper reflection. Harper (2002) further suggests that this effect is not limited to photos. Also other kinds of visual data like paintings, cartoons, or film can be used to elicit discussion and reflection.

In addition to photo elicitation, social science has developed a variety of different visual methods that utilise photos and film in order to enhance field research. 'Rephotography' is a

slight variation of photo elicitation, which uses repeated photos of the same person, object, or site, taken at different times, to inquire people about their perspective on changes (D. Harper, 2002). Expanding on the idea of series of images as in rephotography, social scientists use sequences of photographs or film as a 'visual narrative' to offer an account or to juxtapose different perspectives on a particular social aspect (Keats, 2009). For example, design research in HCI created documentary films to describe and to understand everyday life in the home and to provide inspiration for the design of novel technologies (Raijmakers, Gaver, & Bishay, 2006). The visual material in rephotography and visual narratives is often created by researchers, whereas the so-called 'photovoice' method asks the study participants to take photos. The photovoice method allows researchers to see and to discuss what is important for the people they study (Wang & Burris, 1997; White, Bushin, Carpena-Méndez, & Ní Laoire, 2010). This method has been utilised in HCI as a participatory design technique (Jones & Baldwin, 2009) and also as a 'cultural probe' (Gaver, Dunne, & Pacenti, 1999).

Cultural Probes

The basic premise of the photovoice method, providing study participants with means to capture their experiences and to facilitate reflection, is also at the heart of the 'cultural probes' approach. Cultural probes are collections of objects designed to engage participants and to provoke inspirational responses (Gaver et al., 1999). Gaver, Dunne and Pacenti (1999) gave their participants packages that contained disposable cameras with a list of things to photograph, postcards with evocative questions on the back, media diaries to record their TV consumption, and maps where people could draw where they go to meet friends. The data collected with these objects provided insights into the everyday life of participants and inspired novel designs for the target group of their research (Gaver et al., 1999).

In their review of cultural probes work in HCI, Boehner, Vertesi, Sengers, and Dourish (2007) state that cultural probes have proliferated widely in HCI, yet they have also been interpreted rather broadly. The initial aim of cultural probes was to inspire novel designs (Gaver et al., 1999), but many studies used cultural probes also as a method to collect data for analysis and to evoke discussion and reflection in interviews (Boehner et al., 2007; Graham, Rouncefield, Gibbs, Vetere, & Cheverst, 2007). Furthermore, HCI researchers expanded the concept of cultural probes to 'technology probes', where a prototype deployed in the field also acts as a probe to provoke interaction, collect data, and to inspire novel technologies (Hutchinson et al., 2003).

Although none of the studies on online participation reviewed in this thesis made use of cultural probes, one could interpret some studies in such a way. For example, Ashkanasy and colleagues (2009) set up a social network site to facilitate support amongst young adults with cancer. Their social network sites evoked interaction, served as an instrument to collect data, and it inspired novel support technologies, analogous to the idea of technology probes (Hutchinson et al., 2003). Similarly, the fieldwork on teenagers' participation in social media by Ito and colleagues (2009) contained diaries, which are a popular element of cultural probe packages (Boehner et al., 2007).

Diaries

Diaries are sometimes part of probe packs, but diaries have long been used by social scientists to collect data on daily life from the perspective of the people they study (Hookway, 2008). Alaszewski defines a diary "a document created by an individual who has maintained a regular, personal and contemporaneous record" (Alaszewski, 2006, p. 1). These defining characteristics provide diaries with several advantages over other methods. First, the regularity of diary entries leads to a sequence of data that allows researchers to observe how processes and events unfold over time. Second, diary records are personal and provide insight into what events and activities the participants consider important and how they interpret them. Finally, diary entries are usually created at the same time or immediately after something occurred, which suggests they are more accurate and complete than data based on recalling past events (Alaszewski, 2006; Bolger, Davis, & Rafaeli, 2003).

The major disadvantage of diaries is that they put a high burden on the participants. Research in HCI has utilised mobile phones, websites, and automatic data capturing to minimise the time and effort required to diarise (S. Carter & Mankoff, 2005; Sellen et al., 2007; Sohn, Li, Griswold, & Hollan, 2008). However, the study participants also need to be competent and motivated to maintain their diaries (Alaszewski, 2006).

In related work on online participation, Barkhuus and Tashiro (2010) integrated diaries into their field research to get a rich picture of student life. They used diaries to examine social events, relationships between students, and the students' uses of Facebook to manage their social lives. Barkhuus and Tashiro (2010) used the diary entries as direct feedback for their analysis, while other researchers also used diary entries to prompt discussion in interviews and to interpret the data collaboratively (S. Carter & Mankoff, 2005), similar to the photo elicitation and cultural probe studies discussed above.

3.4.2 Qualitative Approaches to Data Analysis

This review of qualitative approaches to data analysis is again based on approaches used in related work on participation in social network sites. It will discuss the main ideas behind content analysis, grounded theory, memoing, and conversation analysis. I will close this subsection by discussing the role of software like NVivo and Atlas.ti to assist the analysis.

Content Analysis

Content analysis is a flexible approach where researchers systematically examine and categorise qualitative data (Krippendorff, 2004). McMillan (2000) writes that content analysis has its roots in quantifying textual information in mass media, but it is now widely used by social scientists with different theoretical perspectives using both quantitative and qualitative approaches. Quantitative approaches to content analysis work in a deductive manner where researchers first establish categories and then examine and categorise qualitative data, often for statistical analysis at a later stage. For example, Kruitbosch and Nack (2008) used such an approach to determine whether YouTube videos were generated by ordinary users or professionals, and they later used statistical analysis to determine which kind of videos were more popular.

Qualitative content analysis, on the other hand, is based on an inductive approach where the categories are developed in the process of examining the data. Inductive analysis is an iterative process, where the researcher revisits previously categorised data and combines or divides codes to account for new findings and to resolve conflicts (Pfeil & Zaphiris, 2007). Often multiple researchers collaborate in the content analysis to enhance the credibility of the findings. For example, Joinson (2008) worked with another researcher to analyse open-ended survey responses on the motives and uses of Facebook in order to identify themes, count them, and utilise them for a follow-up survey. Lampe and Ellison (Lampe & Ellison, 2010) carried out a qualitative content analysis of their participants' Facebook profiles to complement their quantitative survey data with qualitative online data. Overall, related work on content analysis in the context of online participation suggests that this analysis method is well suited for studies that combine quantitative and qualitative methods.

Grounded Theory

Grounded theory is a widely used approach in field research, developed by Glaser and Strauss (1967), to build theory from data (Corbin & Strauss, 2008). Unlike content analysis,

grounded theory is traditionally based on an interpretivist perspective, in particular on the principles of symbolic interactionism (Corbin & Strauss, 2008). As discussed in section 3.3, this perspective posits that knowledge is subjective and constructed in social interactions with others. Researchers in that tradition use a naturalist approach and grounded theory helps them to develop theory that is rooted in the social interactions they study (Crotty, 1998).

Grounded theory provides a set of systematic but flexible guidelines to carry out qualitative research and to construct theory in an inductive manner. Data collection and analysis run in parallel, shaping each other. Similarly, sampling is an ongoing process driven by concepts emerging from the data analysis. Sampling and data collection come to an end when 'theoretical saturation' is reached, which means that no new insights are emerging (Corbin & Strauss, 2008). The analysis itself is inherently comparative, constantly comparing different pieces of data for similarities and differences (Glaser & Strauss, 1967). The analysis process is based on codification of data to derive and develop concepts from the data. Strauss and Corbin's (1998) approach to grounded theory entails three kinds of coding. The process starts with open coding, where the researcher examines the data to develop preliminary categories. During axial coding, these categories are developed further and linked with subcategories. The final stage of selective coding involves the process of refining the emerging codes and categories as well as the scanning of all the data to select data to support them. Corbin and Strauss (2008) emphasise that the different kinds of coding are mainly for explanatory purposes, whereas in practice open and axial coding go hand in hand, albeit in an iterative manner.

Many researchers use grounded theory rather flexible and appropriate it for their own purposes. Hammersley and Atkinson (2007, p. 156) therefore propose the term 'grounded theorising' as a general analytical stance for ethnographers. This stance is based on Glaser and Strauss's (1967) idea of working with different sorts of data in order to generate and develop ideas, but it rejects the idea of particular procedures that one needs to follow. For example, Lange (2007a, 2007b) in her work on YouTube as well as boyd (2004, 2008c) in her work on Friendster and MySpace refer to their approach as 'ethnographic'. The findings described by both authors are 'grounded' in their data, but they do not explicitly describe their analysis approach.

While 'grounded theorizing' refers to an inductive approach, several authors have also pointed towards a 'sensitised' approach. Such an approach acknowledges that previous insights like personal experience, professional knowledge, and theories shape the development of a grounded theory. A sensitised approach contradicts Glaser and Strauss's

(1967) original approach to grounded theory, which recommended to carry out the literature review only after the analysis is completed. However, Corbin and Strauss (2008) suggest using literature throughout the fieldwork to inform the interpretation of events occurring during observations and emerging themes in the analysis. Similarly, Bowen emphasises that 'sensitising concepts', like ideas from related literature and theories provide a starting point to "discover, understand, and interpret what is happening in the research context" and to produce a grounded theory (Bowen, 2006, p. 3). Several studies of social network sites have employed such a sensitised approach. For example, Barkhuus and Tashiro's (2010) analysis of student socialisation through Facebook used a grounded theory approach that was sensitised by their previous studies of technology use. Likewise, Lampinen, Tamminen, and Oulasvirta (2009) used grounded theory to examine how people manage affiliations with multiple groups on social network sites, and their analysis was sensitised by related theories on identity in online contexts.

Memoing

Memoing is a particular type of reflective note taking that is generally associated with grounded theory. Memos in grounded theory contain the researcher's reflections and analytic ideas, which tie together different pieces of data and abstract concepts (Corbin & Strauss, 2008). Memos are written whenever an idea emerges, and they document how ideas and concepts evolve over time (Miles & Huberman, 1994).

Analytic memos are essential to grounded theory, but they fulfil several functions that enhance also other kinds of qualitative research. Memos extract meaning from data and capture personal perspectives that may colour the research. They provide a record for decisions throughout the research process and document the rationale behind them. Finally, memos are preliminary results that can be shared with other people who have a stake in a given study (Birks, Chapman, & Francis, 2008).

Conversation analysis

Finally, one of the qualitative studies of social network sites reviewed in the previous chapter used conversation analysis to analyse data taken from MySpace profiles (Goodings, Locke, & Brown, 2007). Researchers using conversation analysis collect data that of interactions that are naturally occurring. This means the interactions are not provoked by the researchers, like the interactions on MySpace profiles collected by Goodings and colleagues (2007). The

analysis itself is an inductive process of looking for patterns in the data, like turn-taking, sequential structure, and preference organisation (Roulston, 2006).

While conversation analysis is a viable approach for qualitative researchers, some of the underlying principles appear to stand in conflict with the assumptions guiding this research, as outlined in section 3.3. Conversation analysis focuses on naturally occurring conversations and rests on the "refusal to treat what the people studied say about the social world as a source of information about it" (Hammersley, 2003, p. 752). This principle stands in conflict with naturalist methodology in the symbolic interactionist tradition, where the researcher becomes an active participant in the study settings and develops an understanding of the social processes in collaboration with the study participants (Crotty, 1998).

Computer Assisted Qualitative Data Analysis

Several studies on online participation explicitly mentioned the use of software to facilitate their data analysis. Ellison, Heino, and Gibbs (2006) as well as Skeels and Grudin (2009) used the software Atlas.ti for their grounded theory approach. Livingstone (2008) mentioned the use of NVivo to organise and to code interview data. Atlas.ti and NVivo are two software packages that facilitate the above-described approaches of analysing qualitative data.

The main advantages associated with computer assisted qualitative data analysis (CAQDAS) are assistance in organising large sets of data, running complex searches of the text, and creating links between data (Bringer, Johnston, & Brackenridge, 2004). CAQDAS supports more complex forms of coding than paper-based analysis, because researchers can attach several codes to particular stretches of data that can overlap and nest within one another (Hammersley & Atkinson, 2007). Finally, computers can help researchers to manage their ideas, e.g., through memos linked with the relevant data (Bazeley, 2007).

Despite the advantages, eminent researchers like Corbin and Strauss (2008, p. 310) write that they are "concerned" about advocating the use of computers for analysis. The main concerns associated with CAQDAS are that software packages constrain and influence researchers in their analysis and that the easy search and retrieval through software diminishes the interpretation of data (Bazeley, 2007; Corbin & Strauss, 2008). To address these concerns, Bringer Bringer, Johnston and Brackenridge (2004) urge researchers to demonstrate their familiarity with different approaches to research and to provide a transparent account of how they use CAQDAS in their own research approach.

3.5 Study Design

The previous section provided an overview of different methods to collect and analyse data used in related work on participation in social network sites. In this section I will outline how I combined and adapted different methods to address the research questions of this thesis.

To iterate, the main research question that guided this thesis was:

> **Main research question:** How does participation in passion-centric social network sites influence one's passion?

I broke down the main research question to three sub-question that address different aims: online participation, its influence on the development of passion, and the role of different social relations in online participation and passion. I addressed each sub-question with a separate study. Table 3-2 gives an overview of the aims of the three studies, the requirements for choosing a case, and the methods. I will discuss these aspects in detail in the following subsections.

Table 3-2: Aims, case requirements, and methods in study 1, 2, and 3.

Study #	Research Aim	Case Requirements	Methods	Chapter #
Study 1	Establish understanding of participation in passion-centric social network sites	Passion-centric social network site Users with a clear passion for an individual offline activity	Online participant observation Offline participant observation Qualitative interviews Sensitised approach to grounded theory	Chapter 4 Appendix A
Study 2	Establish understanding of development of passion and its support through online participation	Passion-centric social network site Users at different stages in the development of their passion	As in study 1, and additionally: Follow-up interview with film elicitation Memoing	Chapter 5 Appendix B
Study 3	Evaluate understanding of participation and passion in a setting where offline connections exist	Passion-centric social network site Users with a clear passion and offline connections to other users	As in study 2, with: Photo elicitation instead of film elicitation	Chapter 6 Appendix C

3.5.1 Study 1

Study 1 addressed the lack of a comprehensive understanding of participation in passion-centric social network sites in existing work. The question that guided study 1 was:

Research question 1: What types of participation do passion-centric social network sites support?

Case Requirements for Study 1

I was looking for a case that included a passion-centric social network site and a group of users with a clear passion to address research question 1. As discussed in the previous chapter, the defining elements of social network sites are profiles for each user, publicly displayed connections with other users of the website, and means for public and private communications with them (boyd & Ellison, 2007). Unlike other social network sites, passion-centric social network sites are primarily designed to support connect strangers with a shared interest (boyd & Ellison, 2007).

I looked for a group of users on the passion-centric social network site that clearly exhibited a passion for an offline activity that they carried out individually. As defined by Vallerand and colleagues (2003), the concept of passion relates to an activity that is important for individuals, in which they invest time and energy, and which unlike other interests can lead to both harmonious and obsessive engagement. I focussed on a passion that was based on an offline activity to highlight that participation in passion-centric social network site was only a means of potential support, as articulated in the research question, rather than a necessity. Similarly, I searched for a rather individual activity to ensure that the passion could be supported, yet was not reliant on connections with other people offline and online.

Justification of the Methods

I combined several methods to develop an understanding of participation in passion-centric social network sites. Guided by my theoretical perspective, I used traditional fieldwork methods like participant observation and qualitative interviews to collect data (Hammersley, 2003; Weiss, 1995), and I analysed the data guided by the principles of a sensitised approach to grounded theory, (Bowen, 2006; Corbin & Strauss, 2008).

Data Collection

As most studies on social network sites, I used online participant observation because it provides an immediate way to study online participation in its natural setting, and it requires no extra effort from study participants (Hine, 2000). In line with my theoretical perspective, I became an active participant in the passion-centric social network site that I studied. I could have collected online data as a 'lurker'. However, as an active participant I could experience what it means to craft an online profile, establish links with other users, and exchange comments (boyd, 2007; Hammersley & Atkinson, 2007). Throughout the field research I logged on to the passion-centric social network sites to interact with other users and to collect online data, and I annotated the data with personal reflections, similar to traditional fieldnotes (Emerson et al., 1996).

The downside of online participant observation is that it does not elicit how online participation relates to passion-centric activities offline. Thus, I incorporated offline participant observation into my field research to explore this link between online and offline activities. Similar to my online participant observation approach, I became an active participant in the activities that I set out to study in order to experience the challenges of the passion activity, to socialise in related offline settings, and to explore how online and offline activities relate (Kawulich, 2005). I captured my observations and interpretations in field notes, which contained maps of the places I visited, descriptions of the people I observed, their activities and social interactions, and also my personal feelings as a novice in these settings (Coffey, 1999; Emerson et al., 1996). As recommended by Wolfinger (2002), I started my field notes rather broad and comprehensive. I gradually narrowed down my field notes to noteworthy observations that related to prior observations and to the analytic ideas emerging in my research.

Online and offline participant observation allowed me to watch others and to make my own experiences in these settings. However, as a novice to these settings these experiences and my interpretations of them differed from those of my participants. Thus, I carried out qualitative interviews with several users of the passion-centric social network site to learn about their experiences with the website (Weiss, 1995). I used the interviews to discuss the participants' passions, their participation in passion-centric social network sites, and my observations online and offline. I started the fieldwork with an interview guide with basic questions on online participation, but I carried out each interview in a flexible manner to allow for discussions on what the participant considered important. In addition to face-to-face interviews, I also used telephone and email for interviews. As discussed in the literature

(Hewson, 2007; Sturges & Hanrahan, 2004), telephone and email interviews provide a time-efficient way to interview people that I otherwise could not have contacted, and they yielded rich insights into their online participation. I personally transcribed all interviews to familiarise myself with the data for later analysis. Due to the inductive approach in this research I could not decide a priori which interview material would be relevant for the analysis and which not. Thus, I transcribed all interviews completely to ensure that I would not overlook any potentially essential material (Hammersley & Atkinson, 2007).

I also prepared pre-structured diaries and cultural probes for the pre-studies to study 1 (Alaszewski, 2006; Gaver et al., 1999). I designed these methods to collect contemporary, personal records of how online participation and offline activities relate to passion. However, I had difficulties in recruiting participants during my pre-studies. Therefore, I changed my fieldwork plan to methods that require less effort and commitment from the participants. Instead of diary entries I relied on my own online observations of participants as well their recollection and interpretation of past events during interviews. This compromise meant that the participants had to commit to only one interview, which simplified the recruitment of people.

Data Analysis

The triangulation of different methods helped to balance the advantages and downsides of different methods. Beyond that, it also supported the analysis by allowing me to examine particular events and online activities with data from different sources. Finally, it increased the credibility of the findings by showing that different sources of data point to similar findings, or at least that they do not contradict them (Hammersley, 2003).

I used a sensitised approach to grounded theory to analyse the data. My analysis was guided by the principles of grounded theory, like constant comparison, memoing, and the different kinds of coding to develop an inductive understanding of participation in passion-centric social network sites (Corbin & Strauss, 2008). However, my analysis (and also my data collection) was sensitised by my review of related work on social network sites, which helped me to interpret the study data (Bowen, 2006).

The software NVivo 7 assisted my analysis, but I also used other media to organise, examine, and code data. NVivo was particularly useful to organise the different kinds of data (field notes, online data, and interview transcripts), to code them, and to check my analytic ideas against the data at the end of the analysis. However, I used other media to assist me during the early phases of the data analysis. I repeatedly listened to the interview recordings and checked online profiles to familiarise myself with the study participants. Furthermore, I

started coding on paper because it provided me with more flexibility than NVivo, allowing me to get a quick overview of the data, draw diagrams to organise analytic ideas, and add personal notes.

As recommended by Bringer, Johnston, and Brackenridge (2004) I will describe the analysis process as well as the data collection in detail in the following chapter to make my approach transparent to other researchers. I will treat the principles of the different methods introduced in this chapter as guidelines to illustrate but also to delineate my own research approach, and I will use the appendix to provide examples of interview transcripts, field notes, and other products of my research. Making my own research approach and outcomes transparent also reflects the principle of auditability (Miles & Huberman, 1994), which was outlined in section 3.3.2 as a one of three criteria to evaluate the quality of this research.

3.5.2 Study 2

Building on the findings from study 1, the aim of study 2 was to further explore participation in passion-centric social network sites and to examine how it enhances or complicates the development of passion. Study 2 was conducted to address the following question:

> **Research question 2:** In what ways does participation in passion-centric social networks sites facilitate the development of passion?

Case Requirements for Study 2

The case requirements for study 2 were a passion-centric social network site and users at different stages in the development of their passion. As highlighted by Stebbins (2007) in the context of serious leisure activities, the development of passion can be a lifelong process. I used a cross-sectional approach to understand the role of online participation for the development of passion. Therefore, I sought to recruit people at different stages in the development of their passion from novices to experienced old-timers. I decided to work with the same passion-centric social network site due to my increasing familiarity with this setting, but I worked with different participants in a different geographical location to enhance the applicability of the findings of this research.

Modifications of the Methods for Study 2

I used a fieldwork approach in study 2 to observe the development of people's passions and their participation in passion-centric social network sites over a prolonged period of time. As in study 1, I combined participant observation online and offline with qualitative interviews.

In addition to the methods used in study 1, I carried out follow-up interviews with the study participants. The follow-up interviews allowed me to discuss changes in the development of their passion, like significant events between the first and second interview. Furthermore, I used the film elicitation technique (D. Harper, 2002) in the follow-up interview to reflect upon their passion and online participation. Based on a video recording of the initial interview, I edited short video clips that I used to prompt discussion and reflection in the follow-up interview. Finally, the follow-up interviews also provided me with an opportunity to discuss my interpretations and the emerging findings with the study participants. This 'member checking' process helped to enhance the credibility of the findings, ensuring that they are trustworthy and believable to the group of people I studied (Cho & Trent, 2006).

Furthermore, I also modified my analysis of the data in study 2. I used a sensitised approach to grounded theory (Bowen, 2006) as in study 1, but I made more extensive use of analytic memos during study 2. I used the memos from the beginning of the fieldwork onwards in tandem with the data collection in order to develop the analytic ideas and themes from study 1 further. Due to the ongoing analysis through memos, coding played a different role than during study 1. The emphasis in coding the data shifted from unpacking themes to evaluating the themes developed in the memos. Guided by the principles of grounded theory for iterative coding (Corbin & Strauss, 2008), I looked systematically for data that supported and contradicted the themes developed in the memos in order to test and refine them.

3.5.3 Study 3

The aim of study 3 was to evaluate the understanding of online participation and passion from study 1 and study 2 by applying it to a different passion-centric social network site. I decided to compare the findings with a passion-centric social network site where users also share some form of offline connection in order to challenge previous work that asserts that passion-centric social network sites connect strangers. Therefore, the research question for study 3 was:

Research question 3: Do the stages in the development of passion and the related types of online participation apply to passion-centric social network sites where individuals also have some form of offline connection?

Case Requirements for Study 3

Study 3 required a passion-centric social network site where users share some form of offline connection. I moved to a different passion-centric social network sites to enhance the applicability of the findings of this research and to enhance the likelihood of finding a group of users who also share some form of offline connection in addition to their online connections. As outlined in chapter 6, my search for such a case focussed on clubs and organisations that use passion-centric social network sites to facilitate networking and collaboration amongst its members. As in all other studies, I looked for a group of users that was accessible both online and offline for my fieldwork.

Modifications of the Methods for Study 3

The fieldwork in study 3 was similar as in the previous two studies. Based on interviews and participant observation offline and online I sought to gain the perspective of an insider with regards to their passion, online participation, and social connections online and offline.

The main modification in the fieldwork methods was the use of different elicitation methods. In the first interview I used the participants' contact lists on the social network site to prompt discussion on their relationships with other users of the site, both strangers and people they knew in person. Furthermore, I asked the participants to bring several photos that reflected different aspects of their passion to the follow-up interview in order to gain an insight into what they consider important (D. Harper, 2002; Wang & Burris, 1997). The search for photos got the participants to start reflecting on their passion in between the interviews. I used these photos in the follow-up interview as a prompt to elicit their thoughts, and the participants and I shared our perspectives on passion and the related concepts of online participation and connections with other users.

I used memos throughout the fieldwork to develop the analytic ideas from study 1 and study 2 further. I also coded the fieldnotes, online data, and interview transcripts in an iterative manner. I will describe the procedures for data collection and analysis in detail in chapter 6 and appendix C to make my research process transparent.

Note

Similar to the research questions described in the previous chapter, the study design and the choice of methods evolved in the course of the research. While field research is often characterised as unstructured and messy (Hammersley & Atkinson, 2007; Neuman, 2006), Randall, Harper and Rouncefield (2007) rightfully argue that this does not need to be the case. I started each study with a research plan, and I iterated these plans as needed to utilise available data sources, to account for challenges and opportunities in accessing participants, and to respond to findings emerging in the course of the studies. While I described the final study design upfront, I will describe the decisions that evolved in the course of the studies in more detail in chapter 4, 5, and 6.

3.6 Summary

This chapter summarised the research design of this thesis. This research is based on interpretivism, in particular symbolic interactionism, which views knowledge as a construct of meaningful social interaction. It also suggests a naturalist approach to study social processes in everyday life settings, like social network sites and related offline settings.

Guided by this perspective and based on a review of methods used in related work, I outlined a study design based on three fieldwork studies. The aim of these studies is to (1) develop an understanding of different kinds of participation in passion-centric social network sites, (2) to examine their influence on the development of passion, and (3) to evaluate the relation between participation and passion in a different social network site. The study design contains a justification for the different methods chosen to collect and analyse data. I will use these established methods to illustrate and delineate my own research approach in further detail in the following chapters, which will describe study 1, 2, and 3.

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Chapter 4

Study 1: Participation in Passion-Centric Social Network Sites

4.1 Introduction

The last chapter laid out the research design for this thesis. Based on three studies, this thesis will work towards an understanding of how participation in passion-centric social network sites influences a person's passion.

This chapter describes study 1, which investigated what kinds of online participation passion-centric social network sites support. Section 4.2 describes the aims and the research questions guiding this investigation. Section 4.3 provides details on the chosen case of Australian bodybuilders on the passion-centric social network site BodySpace, and section 4.4 describes the methods used to collect and analyse the data. The findings are described in section 4.5. This section is structured around different types of online participation, as described by the themes of tool, community, and theatre. Section 4.6 provides a discussion of the findings, showing how the tool, community, and theatre themes address the research questions. It includes a critique of the study and discusses open issues arising from this research, which will be addressed in study 2. Section 4.7 contains a summary of all contributions of this study.

4.2 Objectives

The aim of study 1 was to investigate what kinds of participation passion-centric social network sites support. As discussed in the literature review in chapter 2, participation entails both activities and being with others. Thus the first sub-question was concerned with exploring the social connections people develop on passion-centric social network sites, whereas the second sub-question sought to shed light on passion-centric activities supported online. Based on Vallerand's (2010) dualistic model of passion, sub-question 3 and 4 further explored the benefits of online participation as well as their limitations to show how passion-centric social network sites support but also potentially adversely complicate passion. Thus, the main research question and the related sub-questions guiding study 1 were:

Research question 1: What types of participation do passion-centric social network sites support?

- What types of social connections do passion-centric social network sites support?

- What types of activities do passion-centric social network sites support?

- What are the benefits of participation in passion-centric social network sites?

- What are the limitations of participation in passion-centric social network sites?

4.3 Case for Study 1: Australian Bodybuilders on BodySpace

As discussed in section 3.5.1, the specific requirements for choosing a case for study 1 in order to address the above research questions were:

1. *A passion-centric social network site:* The website needed to include the social network site features of profiles, explicit connections with other users, and means for public and private communication. Furthermore, it needed to be designed to accommodate a specific activity (boyd & Ellison, 2007).

2. *A group of users with a related passion that can be carried out individually and offline:* The users needed to view the activity supported by the passion-centric social network site as their passion. As discussed in chapter 2, passion is important for a person and requires the investment of time and energy, but it can also cause conflict with other areas of everyday life and turn into an obsessive passion (Vallerand, 2010). I was looking for a passion based on an individual offline activity to ensure

that the passion-centric social network site was only a means of potential support, as articulated in the research question, rather than a requirement to engage in the activity.

In July 2007 I searched the web for passion-centric social network and I covertly observed users on these sites in order to discover settings that matched the above requirements. My search started with websites discussed in the related work section in chapter 2, like YouTube, Flickr, and DeviantArt. I expanded my investigation to other websites through web searches and comments on other websites, and I discovered the chosen passion-centric social network site BodySpace through a discussion forum post in a MySpace group on bodybuilding. As I will discuss in detail below, BodySpace fitted all of the above criteria. Furthermore, through the BodySpace search function I could locate a group of potential study participants in Australia that I could meet face-to-face or call on the phone. I knew very little about bodybuilding prior to my studies, yet what I observed online pointed towards committed online participation combined with a demanding and risky activity with a potential for both harmonious and obsessive passion. The following two sections will provide more details on BodySpace and bodybuilding.

4.3.1 The Passion-Centric Social Network Site BodySpace

I examined the passion-centric social network site BodySpace[6] to address the research questions of study 1. BodySpace is a popular site for bodybuilders and fitness enthusiasts with more than 400,000 registered users worldwide, which fulfilled all of the above stated criteria. First, it provided all key features of social network sites, as illustrated in the partial screenshot of my BodySpace profile in figure 4-1: personal information and photos on top, a list of publicly articulated friendships with other users, and their comments on the bottom of the page (not visible in the screenshot). BodySpace profiles show the number of comments left on other profiles, the number of friends, and the date of the last profile update. BodySpace also provides generic features like private messaging, blogs, and photo galleries.

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[6] http://bodyspace.bodybuilding.com/

Figure 4-1: The screenshot of the top part of my BodySpace profile shows bodybuilding-specific contents like gym location and accomplishments, as well as features like progress pictures and statistics.

Second, BodySpace is primarily designed for the passion of bodybuilding. The content is bodybuilding-specific and provides information on aspects like motivation, training, diet, and achievements. BodySpace offers bodybuilding-specific features like progress pictures and statistics, which allow bodybuilders to trace their progress during the preparation for a competition (see figure 4-1). Bodybuilders can embed their posing videos from YouTube, share their training plans, and post reviews of food supplements. The BodySpace homepage lists the six most popular BodySpace users as well as profile updates of all users. It shows the six most recently updated profile photos, progress pictures, training plans, and comments on BodySpace profiles. All this information is publicly accessible and searchable.

BodySpace is part of the website Bodybuilding.com, which further underscores its focus on the passion of bodybuilding. Bodybuilding.com consists of three other interconnected components. First, Bodybuilding.com runs an online store for food supplements and gym apparel. Second, the so-called 'SuperSite' provides a large number of articles on training, nutrition, and news from bodybuilding competitions. Finally, the store and the SuperSite are integrated with an online discussion forum to facilitate user participation. BodySpace appears to have evolved from the user profiles on the discussion forum, but both the forum and BodySpace are now listed separately on the Bodybuilding.com homepage, together with the store and the SuperSite.

Bodybuilding.com has a fan page on Facebook and a group in the category "Health, Wellness, Fitness" on MySpace. Similar to advertisements in bodybuilding magazines, these pages may attract new users for BodyBuilding.com in order to increase participation and revenue of the website.

4.3.2 The Passion of Bodybuilding

BodySpace supports the activities of various individuals, like bodybuilders, weight lifters, and regular gym users. All of these activities fulfil the requirements of individual and offline activities. As I will discuss in detail below, I focussed on bodybuilders because their competitions provided a clear boundary for this passion, and the bodybuilding lifestyle vividly illustrated the importance of passion for a person, the time and energy invested into it, as well as the risk of becoming an obsession.

I use the term 'bodybuilder' only to refer to people who work out in the gym to shape their bodies in order to compete in bodybuilding shows (Klein, 1993; Monaghan, 2001). Weight lifters also work out regularly to compete, but their aim is to lift large weights rather than to

shape their bodies (Monaghan, 2001). I focussed on bodybuilders, because weight lifters are less visible on BodySpace than bodybuilders, which would have made the recruitment of participants in Australia more difficult. Active participation in competitions sets bodybuilders (and weight lifters) apart from regular gym users. Regular gym users are a rather inhomogeneous group of partly committed and passionate individuals, but they also consist of more casual gym users who work out only temporarily, e.g., to recover from injuries or to get back in shape. Regular gym users typically show little interest in bodybuilding competitions (Crossley, 2006).

Bodybuilding competitions generally consist of several rounds of posing, in which competitors present their physique to a panel of judges and an audience of friends, peers and fans. The posing is done both individually, to present a personal posing routine set to music, and in groups, so that the judges can directly compare competitors. Competitions are usually split up in several divisions to account for different weight classes and different judging categories, i.e., physique, figure and fitness. Men compete in physique divisions where they are judged by muscle size, symmetry, and proportion. Some women also compete in physique divisions, but most women compete in figure or fitness divisions, which (with different degrees of body fat) emphasize a "feminine shape and proportion while retaining a trained look" (NABBA, 2009, online), rather than muscle size. In this thesis I use the term 'bodybuilder' as an umbrella term for competitors in all of these categories, because despite their different looks, so-called 'figure girls' and fitness competitors follow a similar lifestyle as competitors in the physique category.

Competing constitutes an integral part in becoming a bodybuilder, because it demonstrates commitment to a highly regimented lifestyle of training, eating, and sleeping in order to attain the desired physique.[7] Eating, for example, is not about taste or pleasure, but rather about delivering a controlled flow of energy to their body. Bodybuilders measure all their food precisely and add various food supplements to control the amount of protein, carbohydrates, amino acids, and other elements they consume. They also time their meals strictly. Usually they eat every three to four hours to provide their body with a continuous flow of energy. Junk food and alcohol are strictly excluded from their diet, because they would disrupt their preparation (Smith, 2005). Thus, many bodybuilders can be regarded as role models for healthy living.

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[7] For detailed information on all bodybuilding lifestyle aspects I recommend Arnold Schwarzenegger's 'Encyclopedia of Modern Bodybuilding' (Schwarzenegger & Dobbins, 1998). To date it serves as a reference work on weight training and nutrition.

While many bodybuilders live very healthy lifestyles, some develop pathological behaviours, such as drug use, exercise dependence, and body image disorders (Keane, 2005; Monaghan, 2001; Smith & Hale, 2005; Wolke & Sapouna, 2008).[8] Performance-enhancing drugs seem to be widely accepted in the bodybuilding world, i.e., many bodybuilding shows do not test for drugs and thus implicitly accept their use. Also healthy engagement in bodybuilding contains risks, i.e., social isolation due to the social stigma of muscular bodies and its demands on time and finances (Probert, 2007).

The bodybuilding lifestyle and its possible pathological outcomes vividly illustrate all the requirements for a harmonious and potentially obsessive passion (Vallerand, 2010). Furthermore, bodybuilding is an individual activity that does not rely on online participation, yet bodybuilders were active users of the passion-centric social network site BodySpace.

4.4 Study 1 Fieldwork

In my fieldwork I combined multiple methods to explore online participation in the context of bodybuilding and BodySpace. Participant observation on BodySpace allowed me to observe different types of online participation of bodybuilders, and I used participant observation in the gym and at competitions to learn about the relationship between online participation and offline activities. Participant observation allowed me to watch bodybuilders and to experience for myself what it means to interact online and in the gym, but as a novice in these settings I also relied on interviews to discuss and to interpret what I observed. The triangulation of methods helped me to understand online participation from the perspective of a regular user with a passion for bodybuilding.

As illustrated in figure 4-2, study 1 consisted of three phases of activities. I conducted informal interviews and participant observations to familiarise myself with BodySpace and bodybuilding, as described in section 4.4.1. These pre-study activities informed the design of the methods laid out in the ethics approval (section 4.4.1). The main part of the fieldwork lasted from the end of October 2007 to April 2008 and took place in Australia. I collected data through interviews and participant observation (section 4.4.2), and I analysed the data through an iterative coding process (section 4.4.3).

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[8] For a narrative on the obsessive side of the bodybuilding lifestyle I recommend Sam Fussell's book 'Muscle' (1991). Fussell, an Oxford graduate, vividly describes how he gave

	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08
Pre-study activities	Observation on BodySpace								
	Gym training								
	Informal interviews								
			Ethics approval						
Data collection				Participant observation on BodySpace					
				Participant observation offline					
				Interviews and transcribing					
Data analysis						Open coding			
							Axial coding		
								Selective coding	
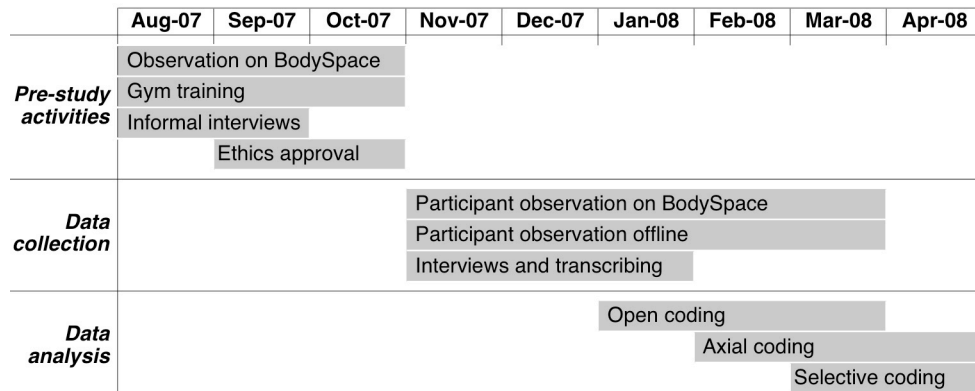
Figure 4-2: Timeline of pre-study activities, data collection, and analysis during study 1.

4.4.1 Pre-Study Activities

Informal Observation on BodySpace, Gym Training and Interviews

I started this study as a newcomer to BodySpace, bodybuilding, and fitness training. Thus, I read through BodySpace profiles on a daily basis to familiarise myself with the online interactions, and I hired a personal trainer to introduce me to the gym. Working out with my personal trainer allowed me to personally experience the hardships of gym training and the responses of my body to training and diet. Conversations with my personal trainer also provided me with a basic vocabulary consisting of exercise terms, like 'preacher curls', and abbreviations for parts of the body, like 'quads' and 'traps'.[9]

During my visits to gyms I carried out informal interviews with personal trainers, other gym users, former bodybuilders, and bodybuilding fans. I used these interviews to learn more about activities and social interactions in the gym. They also helped me to find other sources of information, like bodybuilding websites, magazines, and documentary films.[10] These

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up his job and his ties to his family and friends to fully embrace all elements of the bodybuilding lifestyle, including steroids.

[9] 'Preacher curls' are a biceps exercise. The term 'quads' denotes the quadriceps, a muscle on the front upper leg, whereas 'traps' refers to the trapezius muscle on the upper inner back.

[10] I read Flex, Muscle Mag, and the Iron Man magazine, which contain news from the professional bodybuilding world and advice for training and nutrition. The bodybuilding documentary films included "Pumping Iron" (Butler & Fiore, 1977), Louis Theroux's Weird Weekends episode on bodybuilding (Theroux, 2000) and various short clips about bodybuilding shows and celebrities on YouTube.

sources were particularly useful to understand the history of the sport and to get to know the contemporary celebrities in the bodybuilding world, like Jay Cutler and Ronnie Coleman.

Ethics Approval

In accordance with the regulations at the University of Melbourne, I applied for ethics approval prior to starting the data collection. The application contained comprehensive documentation about all aspects of the research, including a literature review, research questions, target group, recruitment, research methods, data handling, and privacy assurances. Part of the application was also a 'plain language statement', which describes the research in 'plain words' to potential participants in the study. Appendix A contains the plain language statement (see appendix A.1) as well as a screenshot of the website that I used to recruit participants (see appendix A.2) to make transparent what information the potential participants received. The Humanities and Applied Sciences Human Ethics Sub-Committee at the University of Melbourne formally approved this study under the reference number 0719402 on 26 October 2007.

4.4.2 Data Collection and Preparation

Offline Participant Observation

I continued my gym workouts throughout study 1 to observe the activities of bodybuilders, to interact with them, and to experience for myself the challenges of working out. In total, I trained in nine different gyms in Melbourne and Sydney. These gyms varied from gyms for the general public to so-called 'hardcore' bodybuilding gyms, which helped me to observe and interact with different types bodybuilders and other gym users.

I further conducted observations at one amateur bodybuilding show and one professional bodybuilding show in Melbourne. At these competitions I observed and learned about the achievements of bodybuilders, the differences between competitors in different categories, the interactions between competitors and fans, and the emotions of competitors and fans during the event.

I captured my observations in gyms and at competitions in fieldnotes. Usually, I wrote preliminary fieldnotes on paper immediately after leaving the field site, and I produced more formal fieldnotes at home on my computer. The fieldnotes contained observations about the

people in the gym and their social interactions, maps of different workout areas that separate bodybuilders and gym users, and photos of slogans and posters on the wall. As recommended by Hammersley and Atkinson (2007), my fieldnotes also included personal reflections on how confident I felt as a newcomer in this environment, because these feelings coloured the social interactions during the observations and my perception of what is noteworthy and what appears mundane. Appendix A.3 provides an example of such fieldnotes from my first visit to a famous bodybuilding gym in Melbourne. The fieldnotes served as data for the analysis and guided my interviews and online observations.

Online Participant Observation

I conducted online observations on BodySpace and related websites on Bodybuilding.com throughout the entire period of fieldwork, because online data provides a rich source of information without any effort from the participants. Though BodySpace is publicly accessible for any Internet user, I created a BodySpace profile that revealed my real name, my affiliation as a researcher, and a link to a website at the University of Melbourne that explains the aims of this research. (Appendix A.2 shows a screenshot of the website for study 1.) I did this to disclose my presence and intentions to other users of the website following recommendations for online research ethics (Ess & AoIR ethics working committee, 2002; Hookway, 2008; Langer & Beckmann, 2005). Furthermore, being an active BodySpace user allowed me to utilise its features for my own training and to communicate with other users.

Throughout this study I logged on to BodySpace on an almost daily basis to observe, interact with other users, and to collect data. I used the Mozilla Firefox extension ScrapBook, which saves online data on the local hard disc and supports personal annotations. (Appendix A.4 shows a screenshot detailing the features of ScrapBook.) The data comprised of profiles, comments, discussion forum threads about BodySpace, blog entries, and articles posted on Bodybuilding.com and BodySpace. This data served as primary data for my analysis, and together with my observations the online data guided my interview questions.

Interviews

I conducted qualitative interviews (Weiss, 1995) with bodybuilders to discuss BodySpace and the meaning of online interactions for activities related to their passion. I further interviewed bodybuilders who did not use BodySpace to expand my knowledge on bodybuilding and alternative resources for networking, training, and competing. As

suggested by Satchell & Dourish (2009), discussing what reasons they had not to use BodySpace shed light on the limitations of online participation.

The recruitment of interview participants took place through BodySpace and personal contacts. BodySpace includes a search function, which allowed me to identify users in Australia. I created a sampling frame of 72 Australian BodySpace users who had logged into BodySpace in the last two weeks and who had already competed or prepared for their first competition. These criteria ensured that ensured all participants were active users of BodySpace and passionate about bodybuilding. I started by contacting participants in Melbourne, who I could meet face-to-face. Throughout the study I extended my recruitment to other locations in Australia until I had enough interviews to reach data saturation. In total, I contacted 45 BodySpace users across Australia. They received a short personal message on BodySpace that outlined the aim of this research and linked to the study website for more detailed information (see appendix A.2). I established contact to non-users through personal contacts and referrals from study participants. Table 4-1 lists the demographics of all 13 participants in study 1.

Table 4-1: Demographics of the participants in study 1. I changed all names to pseudonyms to protect the privacy of the participants. Non-users of BodySpace are indicated with an *.

Name	Sex	Age	# Years training	Occupation	Interview mode
Bill	M	27	9.2	Fire fighter, personal trainer	Telephone
Catherine	F	24	1.6	Unemployed	Telephone
David	M	32	13.2	Accountant, personal trainer	Telephone
Erica*	F	40	20.0	Personal trainer	Telephone
George*	M	43	27.0	Gym owner, contest promoter	Face-to-face
James*	M	56	36.0	General business manager	Face-to-face
Jarvis	M	23	1.6	Student, musician	Face-to-face
John	M	28	14.0	Landscaper	Email
Lenny	M	22	3.1	Student	Telephone
Mario	M	20	1.9	Student	Telephone
Monica	F	35	15.1	Personal trainer	Email
Rhonda	F	24	8.2	Personal trainer	Telephone
Simon	M	40	20.2	Physical therapist	Email

Prior to the interview, I collected the participants' BodySpace profiles using the Mozilla Firefox extension ScrapBook. All profiles included personal descriptions of their bodybuilding activities and goals, photos, videos, lists of friends, and comments. I used the information on the profile to guide the interview and as raw data for the analysis.

Each interview lasted between 50 and 90 minutes. We discussed their motivations and activities related to bodybuilding together with their use of BodySpace. Appendix A.5 lists my initial set of questions, which I further refined throughout the study as my understanding of BodySpace and bodybuilding grew. I conducted all interviews in Melbourne face-to-face and recorded them using an audio-recorder. When participants were outside Melbourne, then I conducted the interviews via telephone. I used the software Skype to call them on their telephones, and I recorded the conversations through the software Audio Hijack. Three participants preferred to reply to questions via email, as listed in table 4-1.

Immediately after each interview I listened to the audio recording and wrote short descriptions of all participants. These descriptions summarised key issues discussed during the interview and observations about the participant made in the course of the conversation. I used these descriptions together with the BodySpace profiles during the analysis to keep an impression of the participants in my mind. Appendix A.6 lists the descriptions of all participants in study 1 to complement the numerical information in table 4-1.

I finished the data preparation by creating verbatim transcripts of all 13 interviews, which served as raw data for the analysis. Appendix A.7 provides samples of transcripts from interviews conducted face-to-face, via telephone, and via email, to illustrate the richness of the interviews across all three modes. Furthermore, these samples show the level of detail with which I transcribed the data, as recommended by Hammersley (2010).

4.4.3 Data Analysis

The analysis was based on the following data generated during the fieldwork of study 1:

- 12 fieldnotes from visits to gyms and bodybuilding competitions

- 13 interview transcripts

- 10 BodySpace profiles of the study participants

- 57 additional web pages from BodySpace, which include interviews with BodySpace users published online, as well as profiles, blogs, and articles from BodySpace captured during online participant observation

Data analysis was an ongoing process throughout the fieldwork. One part of my analysis was concerned with writing analytic memos to capture observations about similarities and differences between users, to develop initial concepts describing online activities, and to capture theoretical concepts that sensitised my understanding (as discussed in the next section) (Corbin & Strauss, 2008). Further, I wrote memos to reflect on my personal feelings and involvement in bodybuilding and BodySpace in order to remain conscious of how my role as a researcher and my analytic perspective shifted as I developed from a complete outsider to a peripheral participant in these settings (Hammersley & Atkinson, 2007). In capturing the development of my understanding of BodySpace and bodybuilding during my studies, the memos helped me to progressively narrow down the scope of my investigations.

The main part my analysis comprised a computer-assisted, iterative coding process that started during the data collection phase. My coding process was guided by the stages of open, axial, and selective coding of Strauss and Corbin's approach to grounded theory in order to discover emerging themes of online participation in the data (Strauss & Corbin, 1998). As advocated by Bowen (Bowen, 2006), my coding process was also sensitised by theoretical concepts in related work, and I will describe the three stages of coding and the various sensitising concepts in detail below. I used the software NVivo 7 for all coding, because it facilitated the management of various data sources and supported the option to attach several codes to a particular instance of data, which allowed more elaborate forms of analysis (Bazeley, 2007; Hammersley & Atkinson, 2007). I imported all data and the initial memos into NVivo, and I skimmed through all interview transcripts, participant descriptions, and BodySpace profiles to familiarise myself with the data before coding.

Open Coding

During the first stage of coding, I went through the data to develop analytic codes relevant to the research questions (Corbin & Strauss, 2008; Neuman, 2006). These codes encapsulated different types of participation in passion-centric social network sites, but also activities, events, settings, and relationships related to the context of bodybuilding that may have shaped online participation.

The codes developed during open coding had different origins. On the one hand, I developed codes inductively in line with the traditional principles of grounded theory (Glaser &

Strauss, 1967). Some inductive codes were so-called 'in-vivo' codes (Corbin & Strauss, 2008), like 'bodybuilding lifestyle' and 'the gym as a meat market', which represented concepts used by the participants. Other inductive codes described recurrent aspects that I perceived as important during my research, like 'progress monitoring' and 'appreciation'. On the other hand, I also developed codes that were sensitised by related work as well through my research questions. For example, the code 'online friends with offline connection' responded directly to one of the research questions, whereas the work of Wills and Shinar (2000) helped me to identify different kinds of social support in the data. Appendix A.8 provides a screenshot of NVivo to illustrate how I coded data related to social support.

I started coding data in NVivo midway through the data collection, and thus the codes developed and changed as I collected and coded more data. I had several partial passes through the data until I finished data collection, and with each major iteration of my codes I went back to previously coded instances of data to apply the iterated codes. The codes did not change significantly after coding the first ten interviews, which indicated data saturation. After completing all interviews and transcripts, I had one full pass through the data to refine the codes, and several partial passes to apply all code iterations to the data. Open coding resulted in 197 different codes, which unpacked different aspects of the passion of bodybuilding and participation in BodySpace.

Axial Coding

The second stage of coding was concerned with axial coding in order to review the codes, to establish connections between the codes, and to organise them hierarchically into themes (Corbin & Strauss, 2008; Neuman, 2006). Conceptually, axial coding constitutes a separate stage in the coding practice, but as acknowledged by Corbin and Strauss (2008), in practice these processes go hand in hand. I started to organise the codes hierarchically already during open coding, and I iterated the hierarchy of codes and re-coded the data on an ongoing basis to account for new analytical ideas, to resolve conflicts in the data, and to develop my understanding of online participation further.

I conducted much of the conceptual development of the hierarchical themes on paper, drawing sketches of mind maps and using post-its to develop affinity diagrams. Initially, I drew such diagrams in NVivo, because the model tool in NVivo is well integrated with the codes and graphically presents previously established connections between codes. However, the large number of codes and associated data slowed down NVivo, and also the limitations of the size of my computer screen made it cumbersome to work in NVivo. Thus, I reverted to

large sheets of paper to conceptualise processes in flow charts and to cluster codes using affinity diagrams. During this stage, I used NVivo only to examine codes and data and to apply the themes developed on paper back to the digital data.

While affinity diagrams were useful to cluster related codes, I used a mix of inductive and a priori codes to establish the main themes. Many participants highlighted the importance of the 'community', which I used to structure codes related to social relationships, identity, and social support. Furthermore, two theoretical concepts sensitised my analysis at this stage. I used Fogg's concept of technology as a 'tool' (2002, p. 31) as a theme to describe different kinds of instrumental uses of passion-centric social network site that increase the capabilities of a person. Furthermore, I used Goffman's theatrical metaphor (1959) to cluster codes related to self-presentation online into a common theme. Appendix A.9 shows a screenshot of NVivo to illustrate the hierarchy within the theme 'theatre' and the frequencies with which the codes within this theme appear in the data. After several iterations of the themes, axial coding resulted in three main themes clustering codes related to online participation, and two main themes comprising of codes related to offline activities and settings.

Selective Coding

The aim of the last stage of coding was to scan all coded data in order to select excerpts from the data, which illustrate the themes that address the research questions of this study. While I had started selective coding at the end of the fieldwork of study 1, I reiterated and finished this process during the write-up phase of this thesis, after finishing the data collection of all three studies. The challenge in this process was to find concise, yet rich excerpts of data to illustrate different types of online participation from the perspective of the study participants.

As a result of having finished the other two studies, my understanding of passion-centric social network sites had developed further, which provided me with a more critical view as I read through all data again. I did not rearrange or add any themes to the initial analysis, but being sensitised by the other two studies, I paid more attention to instances of conflicting data. Thus, I could resolve themes that had appeared to stand in contradiction in earlier passes through the data, like competitiveness versus camaraderie amongst bodybuilders. On the other hand, I found further outliers that I had not noticed in my earlier analysis, and I coded them with the existing themes.

Based on the frequency of the themes and their importance to the participants, I selected eight codes that described different kinds of participation on passion-centric social network sites, and an additional six codes that described limitations of passion-centric social network

sites. To illustrate the significance of these codes for the activities of bodybuilders in this chapter, I used further data from other codes related to the lifestyle of bodybuilders. All of these 14 codes related to one of the three main themes, titled 'tool', 'community', and 'theatre', which I will discuss in further detail in the findings section.

4.4.4 Reporting of the Data

I will use " " and *italics* for all direct quotes in the text, and indented text for longer quotes, to highlight excerpts from the raw data. Furthermore, I will use the following conventions to specify precisely the source of each quote in the data in order to increase the auditability of my research:

- *Participant's pseudonym:* I changed the names of all participants to protect their privacy. I will refer to the 13 interview participants with pseudonyms like Bill or Catherine, whereas I will use fictitious initials like CR or DN when I refer to other BodySpace users.

- *Data source:* I will use 'interview', 'fieldnote', or 'online' to denote the kind of data source.

- *Event location and data:* Fieldnotes were usually not related to specific participants. I will refer to the place and date of the observation instead to identify the data source.

- *Line numbers:* I will quote the line number from where the quote was taken together with the overall number of lines of that document.

An example of a quote taken from the lines 217-219 from the interview with Bill would be:

> *"It was actually fantastic. I was expecting to be quite nervous. Especially standing in a pair of posing trunks in front of 2000 people can be a daunting idea. But once on stage I had a great time. It was really fun. I had no nerves about it at all." (Bill, interview, lines 217-219/438)*

4.5 Findings

My analysis of the data unpacked eight concepts that describe different types of participation in passion-centric social network sites, and a further six concepts that discuss limitations of

passion-centric social network sites. Figure 4-3 provides an overview of all 14 concepts, which I grouped under the three main themes of tool, community and theatre.

Main themes:	Tool	Community	Theatre
Types of online participation:	Share information	Establish relationships	Self-promotion
	Monitor progress	Exchange support	Exchange appraisal
	Comparisons	Reaffirm values	
Limitations of online participation:	Lack of critical feedback	Lack of integration with offline contacts	Lack of presentations of failure
		Reaffirms separation from outsiders	Unwanted sexual attention
		Lack of discussion of controversial topics	

Figure 4-3: The tool, community, and theatre themes developed during study 1 describe different types of participation in passion-centric social network sites and their limitations.

The tool, community, and theatre themes emerged during my analysis of the data. As described in section 4.4.3, they refer to terms used by the participants as well as terms from the literature in order to describe different aspects of online participation:

1. The tool theme refers to instrumental uses of passion-centric social network sites, like sharing information, progress monitoring, and comparisons. Generally, tools increase people's capabilities and help them to carry out activities to accomplish goals within their passion. This theme was inspired by Fogg's use of the tool metaphor to describe technologies that "make activities easier or more efficient to do . . . or to do things that would be virtually impossible without technology" (Fogg, 2002, pp. 24-25).

2. The community theme describes social aspects of online participation, such as making friends online and empathising with other people's experiences. I chose this term because various study participants and BodySpace users used it, e.g., a popular BodySpace user stated: "*I love being in a community of people who all want to be fit and have a big interest in it.*" (CR, online, line 83/408). This quote shows that the term 'community' was not used to imply co-presence or strong ties amongst people, but rather to refer to a group of individuals that is loosely bound by its shared practices and values.

3. The theatre theme was inspired by Goffman's metaphor of social situations as theatrical performance (1959). I share the interest in how people perform like actors on a stage in order to present themselves in a particular way in public social settings, but I use it in a more narrowly focussed way: In this thesis, theatre denotes the use of passion-centric social network sites as a stage to promote achievements to an audience of friends and strangers, who provide attention and recognition.

The following sections provide a more detailed discussion of these three themes in the context of bodybuilding and BodySpace. For each theme I will first describe the challenges bodybuilders face in order to show their motivation for using BodySpace. I will then illustrate the various types of participation in BodySpace, and I will close each theme by addressing related limitations of BodySpace.

4.5.1 Tools to Improve the Performance

> *"No pain, no gain!"(Slogan in a bodybuilding gym, fieldnotes, Melbourne, 15*
> *November 2007, line 175/189)*

One of the main challenges for bodybuilders was the preparation for bodybuilding competitions: All participants in study 1 occupied full time jobs and trained and competed at an amateur level in their leisure. They usually worked out each day and ate five to eight precisely measured meals per day to develop a strong physique. In the three to four months preceding a competition, the bodybuilders intensified their efforts to get into competition shape. They increased their training load whilst they reduced their food consumption. In other words, they starved in order to get lean whilst they tried to maintain their musculature. This period involved severe physical and mental challenges, and some participants described the last few weeks of preparation purely as *"hell"* (James, interview, lines 217/570).

> *"In any other sport after training you can go and have some beer or some ice*
> *cream and have a day off and relax a little. With bodybuilding there is nothing.*
> *When you commit to a contest maybe 16 weeks of your life is hell. And to*
> *survive on less calories then what you need, takes an enormous amount of*
> *mental strength." (George, interview, lines 426-429/642)*

Most participants used BodySpace as a tool to cope with the challenges during the preparation and to improve their performance in bodybuilding competitions. In the following sections I will discuss how they benefitted from the website's capability to store, process, and share personal information with other users. The benefits included knowledge about workouts and nutrition, as well as information that helped bodybuilders to judge their progress in the transformation of their bodies.

Share Information

The 'hell' of preparation highlighted the bodybuilders' need for information to maximise the achievements in their preparation and to reduce the efforts involved. They had to become experts on training, nutrition, and dieting in order to shape their physique:

> *"Some think bodybuilders overall are dumb or they just talk, are egotistical and*
> *vain, narcissistic. But the truth is, you have to be fairly clever about nutrition,*
> *you have to be amazingly dedicated as far as training is concerned." (George,*
> *interview, lines 429-432/642)*

Usually, bodybuilders got information from magazines, books, and through advice from other bodybuilders. Additionally, many bodybuilders adopted websites like Bodybuilding.com and BodySpace as a vital source of information. They obtained information from articles on Bodybuilding.com, asked other BodySpace users for advice, or simply read through BodySpace profiles of other bodybuilders to learn about their training regimes and diets. Thus, several participants reported that they combined information from BodySpace and other sources for their own training regimes:

> *"My current training is based on advice from a trainer, stuff I've read online, and stuff I've read in magazines." (Lenny, interview, lines /566)*

> *"I have done most of my training advice from reading online and mags. Honestly, if I have questions, I select some of the big guys on BodySpace and send then questions. 95% of the time they are so generous in advice." (John, interview, lines 69-71/214)*

The participants stressed the perceived quality of information on BodySpace as compared to other bodybuilding websites. The profile information allowed participants to find out more about the support provider and to see if the support providers were successful bodybuilders or not. Thus people reported a higher degree of trust in people's advice as compared to online forums, which have a high degree of anonymity. They further appreciated the opportunity to ask more experienced bodybuilders on BodySpace:

> *"When I first started, I browsed through a lot of the profiles to see who was the elite on the site. I was very surprised that most of them if not all would reply pretty quickly. You come across a bloke that has a great back and send a message to him and ask: 'What methods do you use for your back?' And they would send you a message back, mostly pretty detailed as well." (Mario, interview, lines 297-300/507)*

In summary, passion-centric social network sites provided the participants with a wide range of information that was directly available through profile descriptions or upon request in interactions with other users. This information was critical for them to improve their knowledge and skills in order to advance in their passion.

Monitor Progress

In the last few months leading up to a competition, bodybuilders try to reduce their body fat levels in a controlled manner in order to preserve their muscularity. The weight loss during

this period can be dramatic, yet the changes are not visible to the competitors in their daily training. Thus, many participants used statistics and photos on BodySpace to track their progress during their competition preparation. Statistics on BodySpace profiles help people to keep a numerical record of their weight and the size of various muscle groups and to see changes in animated graphs (see the bottom of figure 4-1 in section 4.3.1). Furthermore, BodySpace profiles include a progress photo section, where bodybuilders can upload photos over a period of time to document their progress visually, as illustrated in figure 4-4.
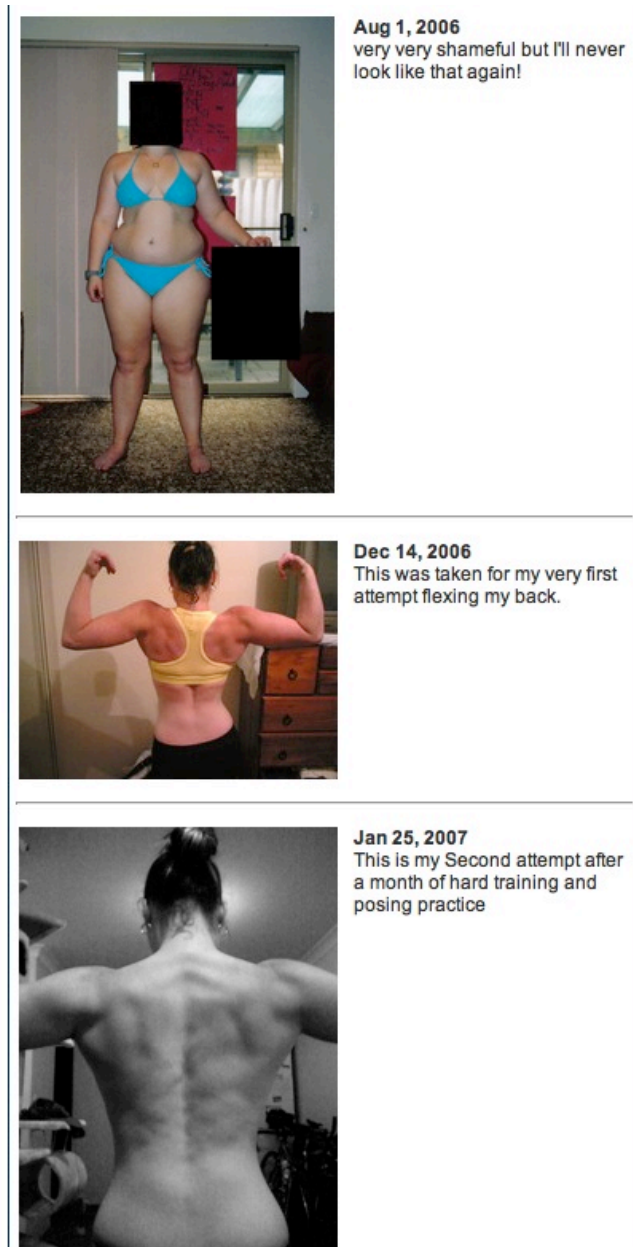
Figure 4-4: Progress pictures on BodySpace visually illustrate changes of a person's physique during the preparation for a competition (photos of Catherine, online, lines 1785-1807/1808).

Catherine, the participant depicted in figure 4-4, originally kept her progress pictures privately in a drawer in her room. When she found it difficult to motivate herself, she used these photos to reassure herself of the progress that she had made:

> *"I use my before-photos a lot. I have them printed out and I use them to look at those and basically see how far I've come and to see how far I want to go"* *(Catherine, interview, lines* 216-217*/373)*

Publishing these photos on BodySpace allowed other people to examine her accomplishments and to comment on them via her BodySpace profile:

> *"AWESOME Progress! Don't be ashamed of your before pics, I only wish I had before photos that detailed! It is a wonderful reminder of what you've done with your body and, of course, what could be if you don't continue!" (Catherine, online, lines 523-525/1808)*

Monitoring the personal progress helped people to reflect on their past achievements, gain motivation, and plan ahead. Collecting and presenting personal data on passion-centric social network sites facilitated these processes, both on an individual level as well as through social interactions with other users.

Comparisons with other Users

Bodybuilders go through the hard preparation work in order to be compared with others in bodybuilding shows. In the course of a show, bodybuilders go through several rounds of posing so that judges can compare their physiques and declare a winner.

In addition to bodybuilding shows, comparisons also play a critical role throughout the preparation to determine one's progress and to derive motivation and inspiration for the hard work. Generally, bodybuilders compare themselves with their training partners and other bodybuilders in the gym. However, most participants in this study worked out in gyms that were predominantly used by regular gym users. Only three participants (James, Rhonda, and John) were training in bodybuilding gyms, but even their comparisons were complicated, because of different workout times, or because competitors wore baggy clothes to keep their body *"under wraps"* (James, interview, line 352/570).

Thus, photos and statistics on BodySpace and other websites played an important role in supporting various forms of comparisons. First, people compared themselves with people on a similar level to evaluate their own performance. Rhonda comparisons on BodySpace to

evaluate her training, whereas James used photos of other competitors online to evaluate his chances against them in upcoming competitions:

> *"I think it's nice to compare yourself, especially as a woman with other women. There aren't very many women who do what we do. And it's nice to know what other women lift, what their percentage of body fat is, what their weight is, what their goals are, and just to compare that to your own. I think that's what I got most out of BodySpace." (Rhonda, interview, lines 257-260/356)*

> *"I used to look at competitors to see some photographs from previous competitions to see any photos from guys in my categories. And then I would say,' yeah, I think I'll be ok' or 'it's going to be hard'. I mainly do that."* *(James, interview, lines 142-144/570)*

Second, bodybuilders compared themselves with others who were in a worse position in order to enhance their self-esteem. Such downward comparisons took place offline, online, and even with people in TV shows. Catherine posted on her BodySpace blog, that she was motivated by watching a TV show, which presents teams of overweight contestants trying to lose weight: *"As sad as this sounds, I think watching the biggest loser got me motivated"* (Catherine, online, lines 1753-1754/1808).

Finally, people engaged in upward comparisons, i.e., they compared themselves with role models that they looked up to. The participants reported various people who they saw as role models and who played an important role in their progress, like their parents, training partners, mentors, as well as famous professional bodybuilders. For example, various participants reported that they were inspired by Arnold Schwarzenegger to start bodybuilding. Similarly, BodySpace expressed their admiration for role models in comments on BodySpace:

> *"I look up to you Simon, true inspiration! Being all natural and looking the way you do is one hell of an accomplishment! Awesome." (Simon, online, lines 710-712/2712)*

Comparisons were closely related with the previous concept of progress monitoring. Seeing other people's progress illustrated on passion-centric social network sites, and comparing that with their own progress facilitated reflection and provided motivation.

Limitations of Tools

Passion-centric social network sites used as tools helped bodybuilders to enhance their performance in trainings and competitions, but the online participation also had its limitations. The main limitation of BodySpace as a tool was the lack of critical feedback online that bodybuilders need to critically examine their progress. Some BodySpace users posted comments on other people's profiles to ask for a critical examination of their progress in order to improve their physiques for a competition: *"I'm getting ready for a big competition in May, check my profile and gallery and give me feedback and constructive criticism. Tell me where I need to improve. Thanks!"* (Bill, online, lines 177-179/305) However, I did not find any publicly visible evidence for such critical appraisal on BodySpace, and none of the participants reported any instances of private feedback. Only one of the participants said that comparing his progress with others on BodySpace he came to the conclusion that *"it might be wise to have a break and then start again"* (Lenny, interview, line 98/566). However, he indicated that this decision was based on his own observations rather than on someone else's critical appraisal.

Furthermore, two experienced bodybuilders (Bill, Simon) reported that they did not use BodySpace as tools. They both said that BodySpace was not relevant to their trainings or competitions and that they only use it to socialise:

> *"How is BodySpace connected what you do in the gym?*
> *It isn't."* (Simon, interview, lines 122-123/152)

> *"No, I don't use BodySpace for anything other than really just a bit of fun, being able to talk to other people who are like-minded into bodybuilding."* (Bill, interview, lines 134-135/438)

I will further elaborate on the significance of these two outliers in the discussion section of this chapter. After discussing various instrumental uses of BodySpace, I will delve into rather social uses of BodySpace in the following section.

4.5.2 Community to Mitigate Social Isolation

> *"It's a very isolated sport—bodybuilding—you've got to want to do it for yourself."* (Erica, interview, line 162/343)

A second major challenge for the participants in this study was social isolation. Bodybuilders usually meet their peers at competitions and in gyms. However, most participants in study 1

had very few if any offline interactions with other bodybuilders, because bodybuilding is a minority sport in Australia and competitions are held very rarely. Furthermore, only 3 out of 12 participants worked out in dedicated bodybuilding gyms (George, John, and Rhonda), whereas all others trained in gyms where they were isolated from other bodybuilders:

> *"In my work life people have no idea I'm a competitive bodybuilder, they mostly think I may lift weights to stay in shape. Even at the gym I train at, there are only one or two fellow competitors who understand the discipline and mindset involved in bodybuilding competitions." (Simon, interview, lines 81-83/152)*

Additionally, as indicated by the above quote, the participants also felt socially isolated from the general public. Often, the general public could not relate to the intense training, the commitment, and the aesthetics that the participants valued. Moreover, they felt subject of stereotypes, like that *"bodybuilders overall are dumb or they just talk, are egotistical and vain, narcissistic"* (George, interview, lines 429-430/642). The lack of understanding, stereotypes, and differences in values signified strong boundaries between the bodybuilding community and outsiders.

Although the participants generally mourned about their isolation from the public, some also derived pride in being special and different, as expressed in the following comment on BodySpace: *"If it was easy everyone would do it."* (Rhonda, online, line 236/239) This quote illustrates how insiders used BodySpace to reaffirm the boundaries of the bodybuilding community, and it further highlights the importance of the hardships of competing for their group identity.

Many bodybuilders viewed BodySpace as a community, which alleviated their sense of social isolation and strengthened their identification with the passion of bodybuilding. In the following sections I will discuss how bodybuilders used BodySpace to find friends online, exchange support, and reaffirm the values shared in the community.

Establish Relationships

The personal relationships among bodybuilders are a complex subject matter. Bodybuilding magazines, books, and in particular documentaries like "Pumping Iron" praise the strong sense of camaraderie amongst bodybuilders, which has been supported by some participants:

> *"It was not just about being strong and fit. It was a lifestyle sort of thing. It was a way of being a part of a community almost. Through working out you develop new friendships in the gym." (Mario, interview, lines 118-120/507)*

On the contrary, most participants described a sense of social isolation from their peers, as discussed above. Beyond that, hierarchies and competitiveness in the gym further complicated the development of relationships between bodybuilders. For example, Lenny found it difficult to penetrate the hierarchies in his gym in order to establish relationships with more senior bodybuilders:

> *"I do train by myself. I would like to have a training partner to train with, but my friends are a bit lazy. And other people in the gym don't really [socialise]. They are all bigger, so they don't socialise with me or other smaller people there." (Lenny, interview, lines 104-106/566)*

Furthermore, bodybuilding is a very competitive activity, which creates a mix of rivalry and connectedness at bodybuilding competitions:

> *"And there is a psychological battle going on backstage when you pump up in the pump up room. You look at the other guy and assess his physique. Hey, I've got better legs than him, or bigger biceps . . . There is a sense of camaraderie at the same time . . . When you are lining up just to go on stage, we all turn to each other and say 'Good luck man!' You can't really touch each other, because there is the tan and you don't want to mark your body, so you shake your hand. It's a genuine appreciation of each other's physique and good luck." (David, interview, lines 140-167/541)*

Due to their social isolation, bodybuilders use social network sites to establish online relationships with others in the community. On BodySpace people can search for new connections, discover other members, and add them to their network. BodySpace users only become so-called 'friends', when both parties accept the friendship request. Friendship requests that do not get accepted are listed as 'stalking' on the profile of the person that sent the request, and as 'fans' on the profile of the person who received the request. This mechanism provides transparency for the befriending mechanism in order to prevent spam requests and to facilitate connections amongst those who are serious about bodybuilding:

> *"On there, you can have your mutual friend and you can have your fan club of friends. Fan club is where people add you but you don't really want them on your list. And I tend to chat with my mutual friends quite a bit. I tend to comment on their pictures." (Rhonda, interview, lines 271-273/356)*

Table 4-2 provides descriptive statistics about the numbers of friends, fans, stalkers, and offline contacts on BodySpace of all participants in study 1. The number of BodySpace

friends ranged from 8 to 147 friends, and the vast majority of these friends were pure online contacts. Only four participants stated that they had offline contacts as friends on BodySpace, and only two out of these four reported that they knew other competitors in their area that were also actively using BodySpace. In one instance, a contact established on BodySpace turned into a friendship offline: *"I have met 3 different bodybuilders from my area from BodySpace and in all cases great people and in fact one has become a really special close friend whom I never would have met if I wasn't on BodySpace"* (John, interview, lines 108-110/214). However, most contacts on BodySpace were purely online contacts, as indicated by Monica: *"I don't have friends in real life that use BodySpace. Most of my BodySpace friends are interstate or overseas."* (Monica, interview, lines 108-109/141)

Table 4-2: BodySpace contacts of the participants in study 1. Non-users are indicated with an *.

Name	# Friends	# Fans	# Stalking	# Offline contacts on BodySpace
Bill	17	0	0	0
Catherine	86	3	0	Fiancé has a profile but does not use it.
David	8	2	0	0
Erica*	-	-	-	-
George*	-	-	-	-
James*	-	-	-	-
Jarvis	67	1	42	0
John	11	110	2	Met 3 bodybuilders in his area online.
Lenny	147	0	65	0
Mario	92	14	14	Training partner has a profile but does not use it.
Monica	84	2	4	0
Rhonda	14	21	5	0
Simon	35	78	1	Found a few competitors on BodySpace.

While BodySpace was predominantly used to find friends online, six participants used Facebook and MySpace to keep in touch with their offline friends outside the bodybuilding world. For example, Lenny stated: *"Facebook is a bit more about talking to friends and stuff like that, I'd say it's more of a social network than a bodybuilding specific forum"* (Lenny, interview, lines 524-525/566). However, other bodybuilders did not see any purpose in other social network sites than BodySpace due to the lack of a shared interest or activity:

> *"MySpace or other networks are more focussed on friendships and meeting new people. There is no real reason for people to get together. Not joining for a single kind of thing like fitness. I found it to be very boring and garbage. On BodySpace everyone is there together for the same purpose. And you know mostly that the people who have joined are going to give you vital information, or people are going to ask. And people are motivated by the same thing. And I find that great way to find people with the same goals and aspirations." (Mario, interview, lines 289-295/507)*

Establishing friendships was a key theme in this study. Passion-centric social network sites facilitated the finding of peers and the development of weak tie relationships with a large number of people. Some online friends developed strong ties through ongoing social interactions. In some instances, friendships even transgressed the boundaries of BodySpace and turned into offline friendships. These BodySpace networks generally provided critical social support (as I will discuss in the next theme) and they mitigated the sense of social isolation from peers.

Exchange Support

Friends on BodySpace provided important support for training, dieting, and the mental wellbeing of bodybuilders. In my analysis I distinguished between three forms of support: First, instrumental support contained all forms of tangible or material aid, such as spotting (assisting) in weight training or slapping up fake tan backstage in competitions. Second, informational support contained the exchange of knowledge, such as advice on training regimes and experiences with food supplements. Finally, emotional support included esteem support, validation of progress, as well as companionship. For example, Bill received emotional (as well as informational and instrumental) support from his training partner during the preparation for his first competition:

> *"Just being there every day is a huge bonus. If I was having trouble with my diet, I at least had a sounding board. Although he wasn't dieting down he was still going through the training with me every day. He could see me on a daily basis and see what I was doing. He was able to give me emotional support and physical support. Because I was training really hard and it's good to have someone there to motivate you and to push you, to get those last few reps out. Or even just to give you positive feedback, saying 'yeah, it looks like your diet is*

going well. Your body fat has come down this week, you can see it. You're

looking big'." (Bill, interview, lines 241-247/438)

BodySpace friends rarely provided instrumental support due to the lack of physical contact. However, BodySpace offered access to informational support, as discussed in section 4.5.1, as well as emotional support. Emotional support usually got exchanged through comments on the profile and personal messages on BodySpace. These messages expressed empathy and reassurance, which strengthened the sense of belonging to the community. For example, Simon used his BodySpace blog to thank a professional bodybuilder for his reassurance in response to steroid allegations on an online discussion forum:

> *"Last night I stumbled upon a forum thread basically devoted to whether or not*
> *I was natural. Now I don't know a single person who posted, but there were*
> *over three pages of statements that I am a liar and a cheat who uses steroids!*
> *Initially I was enraged, but soon realized just who these cowardly Internet*
> *people are. To my surprise, S.K. emailed me a short note of support, as he must*
> *have seen some of these same forum posts. This guy has been dealing with this*
> *sort of thing his whole career, so I really appreciated his help." (Simon, online,*
> *lines 2570-2577/2712)*

This subsection highlighted the benefits of friendships with other users of passion-centric social network sites. Despite the competitiveness of the sport, people exchanged support online that helped them in achieving their goals and strengthened their sense of belonging to the community.

Community Values

The support exchanged online also reaffirmed the values within the community. I use the term 'values' in a broad sense to refer to what is important for individuals or a community as a whole. Bodybuilding slogans like the '3 D's: Dedication, Determination, Discipline' and 'No gain, no pain' describe principles that bodybuilders value, like their strong commitment to the bodybuilding lifestyle and the capability to endure suffering in order to succeed. These slogans were shared through interactions with peers, articles in bodybuilding magazines, and slogans posted in the gym (see figure 4-5). Bodybuilding gyms (unlike most regular gyms) presented the accomplishments of bodybuilding celebrities on their walls to reinforce the achievements and values of bodybuilding (see figure 4-5).

Figure 4-5: The walls of bodybuilding gyms present slogans and accomplishments of role models, which reaffirm the values within the bodybuilding community (photos of bodybuilding gym in Melbourne, fieldnotes, 15 November 2007, line 177/188).

BodySpace profiles often incorporated similar slogans and images that expressed bodybuilding values. The participants posted slogans as their goals on their BodySpace profile, like *"Train Harder, Faster. Eat Better and Feel Leaner!"* (Catherine, online, line 1/1808). They also used their forum signature on the BodySpace profile to communicate slogans, like *"Nothing is impossible!"* (Monica, online, line 26/1583). Outsiders usually could not relate to the intense workouts and diets of bodybuilders that constitute the norm in bodybuilding. Thus, the exchange of slogans with fellow bodybuilders on BodySpace reaffirmed the participants in their activities, and it strengthened their identification with the community, as indicated by Jarvis:

> *"It makes you feel like you are not alone. It makes you feel normal, because other people do it as well. Maybe, they give you a sense of legitimacy to what you are doing." (Jarvis, interview, lines 380-382/498)*

Slogans on passion-centric social network sites helped the participants to learn what counts in the bodybuilding world. The interplay of reading other people's slogans on BodySpace and posting their own reaffirmed the values shared in the community. The affirmation of values on BodySpace provided a sense of connectedness to the bodybuilding community, which was vital due to the lack of contact with peers in other settings.

Limitations of Community Participation

BodySpace used as a community provided opportunities for bodybuilders to enhance their support networks, but the online collaboration also had several limitations: First, BodySpace

did not appear to be well integrated into interactions with close offline contacts, like training partners and coaches. For example, Bill's training partner did not use BodySpace, whereas the training partners of Catherine and Mario had profiles on BodySpace but did not use them. As discussed before, six participants used Facebook and MySpace to keep in touch with offline friends, yet the findings suggest that BodySpace had little to offer to interactions with other bodybuilders known offline.

Second, BodySpace helped bodybuilders to connect with peers online, but it seemed to reaffirm the marginal status of bodybuilders in the public eye. People who did not compete could not relate to the challenges involved in training and diet, the motivation to shape the body in such a way, and the achievements in competitions. Some bodybuilders bemoaned the lack of understanding by outsiders, yet their participation in BodySpace seemed to further strengthen the separation between bodybuilders and non-bodybuilders:

> *"My criteria for adding friends is that they must actively compete in the sport of bodybuilding of fitness. Personally I draw a large distinction between competitors and those who just train at the gym to stay healthy." (Simon, interview, lines 99-102/152)*

Finally, people appeared to censor their own interactions on BodySpace, because most interactions are public and linked to their profile. The self-censorship was noticeable in the widespread absence of negative comments or discussions of controversial issues like steroids on BodySpace. Steroids support the building of muscle, but they are illegal in most countries due to the associated health risks. Many bodybuilders argued that without steroids it would be impossible to create a physique to compete on a professional level:

> *"Everyone knew, as unwritten knowledge, everyone who wanted to compete at the highest level, you either took the steroids or you couldn't compete, you weren't going to win. And everyone still understands that." (James, interview, lines 237-240/570)*

Many bodybuilders admired the achievements of professional bodybuilders, yet steroids were rarely discussed on BodySpace. I will further expand on possible explanations for this discrepancy in the discussion section of this chapter. Before that, I will use the following section to expand on the practices related to the presentation of achievements on passion-centric social network sites.

4.5.3 Theatre to Present Achievements

> *"A lot of these guys have nothing else in their lives. They don't have a good job. So it gives them kudos, it gives them self-affirmation, or affirmation from other people." (James, interview, lines 443-444/570)*

A third challenge of bodybuilders is to find recognition for the sacrifices they make. Bodybuilders invest large amounts of money and time for their training and nutrition, and they endure severe physical and mental challenges in order to compete. Beyond that, they sacrifice social relationships due to the large amount of time they commit to their training and they risk social stigma due to the changes in their physique. None of the participants received any noteworthy financial benefits from competing in bodybuilding shows. They rather paid considerable entry fees for competitions. However, the participants agreed that the sacrifices of many years paid off when they got to present their bodies on stage in competitions:

> *"It is the most nerve racking experience of my life, but also the most satisfying experience. After sacrificing so much to be there and training so hard everyday (twice a day even), it means so much to be standing on stage in fantastic condition for everyone to see." (Monica, interview, lines 104-106/141)*

Bodybuilders rarely find recognition for their hard work beyond the short-lived experiences of bodybuilding shows. Thus, for many bodybuilders BodySpace serves as an environment where they present their achievements in training and bodybuilding shows in order to gain recognition. Goffman (1959) used the analogy of theatrical performances for such self-presentations. He compared social situations in everyday life with plays in which actors seek to present a particular character to an audience in a theatre. Similarly, BodySpace can be characterised as such a social setting, where people craft a presentation of themselves and their achievements for a network of peers that can relate to these achievements and provides recognition.

Self-Promotion

One of the main motives for BodySpace use was self-promotion, whereby bodybuilders pointed out their accomplishments in order to be seen as competent by observers. The accomplishments of bodybuilding lie in the aesthetics of the human body, which some bodybuilders compared with an art form:

"I think, when I'm on there I'm displaying art in motion . . . Yeah, and it's beautiful, the human body is beautiful. And it is meant to be that way." (David, interview, lines 90-98/541)

BodySpace provided people with an environment to display their accomplishments on their profile through photos, videos and descriptions of achievements in bodybuilding competitions. Photos usually showed poses at competitions or favourite parts of their bodies. The quality of these images varied from photos taken in underwear against a mirror in the bathroom to professional studio shots (see figure 4-6).
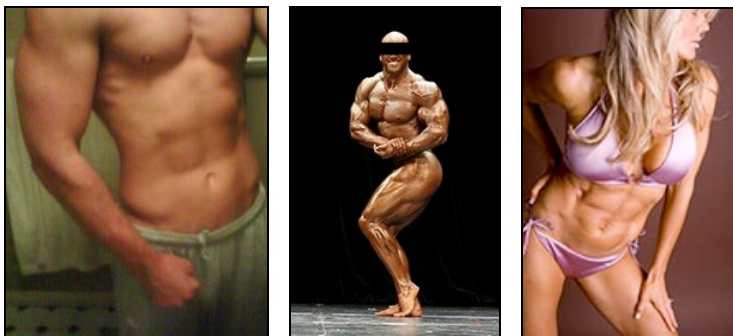
Figure 4-6: Profile photos generally promote the person's favourite body parts. Their quality ranges from photos taken against a mirror in the bathroom (Bill, online, line 45/305) to professional shots at competitions (Simon, online, line 3/2712) and in studios (BN, online, line 275/455).

Several participants in study 1 indicated the importance of self-promotion on BodySpace for their motivation to train, their self-esteem, and their status in the community. However, not all participants were as bold in their expression as John:

"Another thing I've got to say about BodySpace, which I think is the most important thing to most of us, it gives us a place to post our picture for the whole world to see. Bodybuilders need to be noticed. It feeds our muscle ego, it motivates us. There are thousands of guys who show photos of themselves in their bathroom in their underwear flexing. They aren't thinking about anything but to show off what they look like and to see for themselves what they look like. This all might be strange to the non-bodybuilding world but not to us, it's normal." (John, interview, lines 166-173/214)

People can carefully tailor their self-presentations on passion-centric social network sites through their profile photos, descriptions, and interactions with other users. Usually, the participants sought to present their achievements within the passion in order to gain attention and feedback from other users, as I will discuss next.

Exchange Appraisal

Often, the intention behind the promotion of achievements was to gain attention and feedback. The study participants earned applause from the audience in bodybuilding shows, received votes from the judges, and earned feedback from comparisons with other competitors. Some bodybuilders got affirming feedback from their training partners in the gym, but most participants in study 1 worked out in gyms with only a few or no fellow bodybuilders at all. One of the female participants even faced negative feedback from other gym users, because they could not understand why she wanted to put on muscle mass for a competition:

> *"I lost a good couple of friends over it, because they didn't agree with what I was doing and couldn't understand what I was doing, and didn't want to be my friend because of it. I lost a couple of friends. I also got a lot of old gentlemen at my gym come up and basically say: 'females shouldn't look like you, what are you doing, you should be more ladylike'. I've got a lot of criticism . . . They got me down, got me questioning what I was wanting to do. But in the end I decided that I wanted to do more. I was fighting with myself going to the gym every morning, because I knew they were there and I knew I was going to get criticised." (Catherine, interview, lines 190-200/373)*

While outsiders often could not relate to the activities and values of bodybuilders, BodySpace provided an audience who could empathise with such experiences. Users of BodySpace exchanged comments and private messages to express their appreciation of the hard work and achievements. Often comments were only a sentence long, yet these exchanges provided an important source of recognition:

> *"The people online seem to be more supportive than the people in real life. They don't seem to be afraid to say: "Hey, you've done a great job!", or, "Keep up the good work!", or things like that. I get a lot of that, which for me is great motivation. Whereas in the gym, nothing is said, nobody said anything about my weight loss, but more when I started to put on mass. So they kind of focussed on the negative more than on the positive." (Catherine, interview, lines 572-262/373)*

BodySpace provided several mechanisms that help bodybuilders to gain attention for their updates on photos, videos, and stats. Similar to Facebook, BodySpace profiles contained a personal news feed that kept individuals up-to-date with events in their network of friends. Furthermore, BodySpace highlighted user updates and the most popular profiles on the

homepage, as illustrated in figure 4-7. Thus, the BodySpace homepage was central to find new friends or to get discovered by others. Finally, some participants sought attention proactively through comments on other people's profiles in order to inform them about recent achievements in competitions:

> *"Hey, just thought I'd send you a message to say that my first two comps went well. I had two in succession I competed in the juniors . . . and came 4th on both occasions against a large field. I was very happy with my first attempt and I now target to get more mass on me. Pictures are available from my profile and from my galleries. Hope all is well. Kind Regards"* (Mario, online, lines 1150-1154/3671)
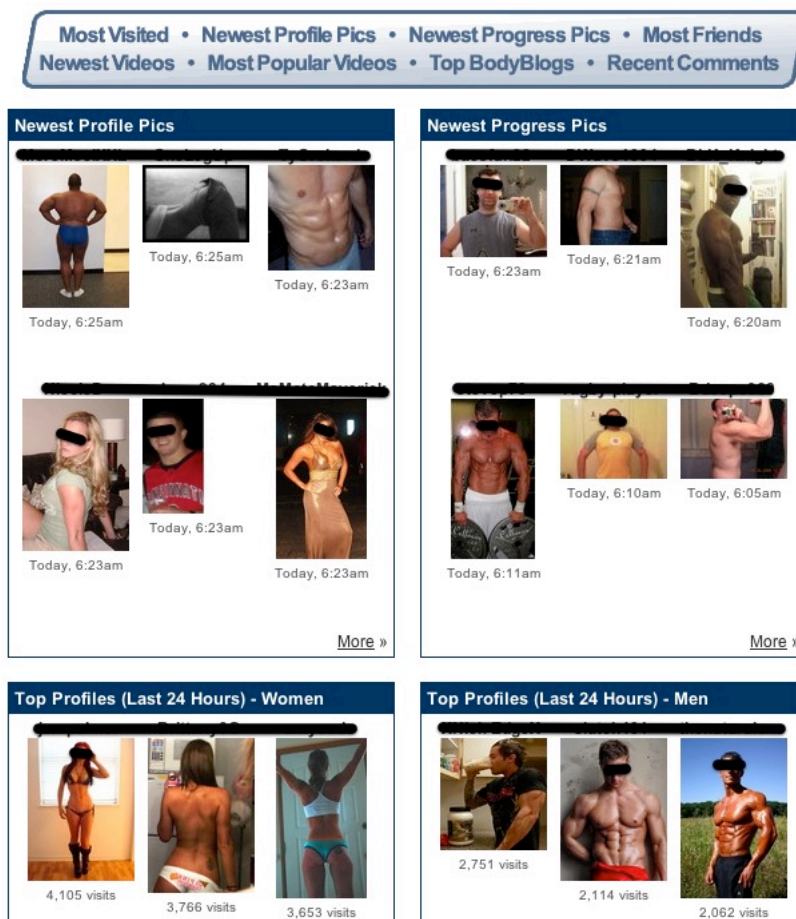
Figure 4-7: The BodySpace homepage presents links to recently updated profiles together with profiles of the most popular users.

Attention and feedback on BodySpace had different functions. The online data included expressions of empathy, e.g., *"We all know how much dedication, determination, discipline go into creating the ultimate body! You're well on your way to perfection."*(Bill, online, lines

261-262/305), praise, e.g.: *"You are looking great my friend! Incredible progress, very lean and cut up, great work!"* (Mario, online, lines 142-143/3671), and reinforcement of behaviour like: *"Great Traps! You are looking great, keep at it, it's working!"* (Monica, online, line 990/1583) Such feedback was important, because it came from people who engaged in the same activities and could recognise the value of achievements in this domain. As indicated in the quote below, such feedback provided participants with motivation for their challenging lifestyles:

> *"I still can't get over all the encouraging comments I get everyday. They really keep me going and I can't possibly stop now and get lazy, after all the amazing things everyone has said about my progress . . . If I'm having a bad day, all I have to do is start reading my comments and it turns my attitude around."* (CR, online, lines 111-142/408)

Passion-centric social network sites provided a fertile ground for the exchange of appraisal. They offered profiles for self-promotion with an extended audience of online friends, and their focus on a specific activity ensured that all users could relate to presented achievements and recognise their significance. Thus, appraisal was a frequently mentioned benefit of passion-centric social network sites.

Limitations of Theatre Participation

The interplay of self-promotion and feedback on BodySpace provided valuable recognition, but one limitation was that people presented themselves in positive ways only. Possibly, since most interactions on BodySpace were publicly visibly, users presented predominantly success stories from competitions, whereas difficulties, disappointments, and failures rarely got published. Usually, difficulties only got reported on BodySpace at a later stage if they were overcome successfully, and disappointments were sometimes reinterpreted as a success by lowering the level of what counts as a success:

> *"I got up on stage and competed, placing 6th. I'm quite proud of this as people kept telling me I was too tall to do it."* (Bill, online, lines 37-40/305).

A second limitation of the theatrical use of BodySpace was the risk of receiving unwanted, inappropriate comments. The participants did not report bullying or flaming on BodySpace, but some of them received comments that alluded to their sexual attractiveness rather than their bodybuilding achievements. Most participants had photos on BodySpace that showed them posing almost naked in competitions in order to be judged for their achievements in the

sport. Some participants said that the physical attraction was an important motivation for them to get into bodybuilding. However, especially the female participants received comments in the gym and on BodySpace that they deemed inappropriate:

> *"I think a lot of it is men being men. They see someone who is blonde and tanned and they are going to comment on that picture, whether they are awesome pictures or they are ok pictures. You look at some other girls on there who have the most incredible bodies, but they are perhaps not the prettiest girls. They don't have as many comments. I think that's really unfair, because the whole purpose of BodySpace is to appreciate a good body and to be able to talk about the sport of bodybuilding, and not be able to pick a good looking girl."*
> *(Rhonda, interview, lines 119-124/356)*

Also two male participants (Simon, John) received messages on BodySpace that contained both male and female propositions. They explained that bodybuilding attracts so-called 'muscle groupies', who are usually not competitors, but visit bodybuilding shows and BodySpace because of their inclination for muscular bodies:

> *"Think about us on stage—a bunch of near naked men in front of total strangers. Think about the fact [that] there must be some people out in the crowd who are looking at you not only as a bodybuilder but as a sexual being."*
> *(John, interview, lines 199-203/214)*

4.6 Discussion

Study 1 addressed the lack of empirical work on social network sites that are designed to support people's passion. The specific question this study sought to answer was what types of participation passion-centric social network sites support. The findings described eight different types of participation in passion-centric social network sites, clustered into three main themes. First, people use passion-centric social network sites as a tool to improve their performance, in particular, to share knowledge, monitor their progress in the pursuit of their passion, and to compare their progress with others. These tool uses underline the utility of online participation for the activities that people carry out in offline settings to achieve their passion-related goals, as asserted by theory on persuasive technology (Fogg, 2002; Khaled et al., 2006).

Second, people use passion-centric social network sites as a community to establish relationships online that provide them with support and reaffirm the values underpinning their passion. As on friendship-driven social network sites like Facebook (Donath, 2007; Ellison et al., 2007; Lampe et al., 2006), users of passion-centric social network sites benefit from the wide range of connections and the support exchanged in their personal networks online. In contrast to friendship-driven social network sites, connections on passion-centric social network sites are established based on shared activities and values, rather than on pre-existing offline contact. This shows that while people benefited from their personal networks online, they also associated passion-centric social network sites with a sense of belonging to a community that shares their interest, activities and values. As discussed by Willson (2010), both the personal network and the community perspective highlight different aspects of being with others in the context of social network sites. In this study, the personal network perspective highlighted issues like personal relationships and support on passion-centric social network sites, whereas the community perspective showed the importance of shared values and a sense of belonging.

Third, people utilise passion-centric social network sites as a stage like in a theatre, which allows them to promote their accomplishments and to gain recognition from a large audience of like-minded people. Research on friendship-driven social network sites showed that self-presentation online is closely connected with the image a person aims to convey offline (Aguiton et al., 2009; Pearson, 2009; Walther et al., 2008), whereas perceptions of other users on passion-centric social network sites stem solely from online contact. However, the focus on a shared passion comes with a set of values that guides how people present themselves online, and it further ensures that users can empathise with one another, because they share similar experiences.

The broad range of online activities described by tool, community, and theatre themes highlights how deeply passion-centric social network sites are entwined with the everyday lives of their users. While related research on friendship-driven social network sites (Beer, 2008b; boyd & Ellison, 2007) and professional social network sites (DiMicco et al., 2008) argues that a tight integration between offline and online interactions is based on having pre-established offline relationships with other users, this study indicates that a tight integration of offline and online activities can also be achieved when offline contact is very rare. The three themes of this study showed different yet interrelated facets of offline and online interactions. Passion-centric social network sites support offline activities (tool), personal relationships and support (community), and recognition by peers (theatre). Thus, a close

integration of social network sites with everyday life experiences does not solely rely upon offline relationships with other users.

In the following subsections I will address the sub-questions that guided study 1 in order to elaborate on the significance of online participation for passion. I will discuss different aspects of online participation—social connections and activities—and I the benefits as well as the limitations of passion-centric social network sites. Furthermore, I will discuss outliers—participants who did not neatly fit into the three themes—to explain how the questions they posed and the limitations of this study led to study 2.

4.6.1 Connections with Strangers Online

The first sub-question of this study set out to explore with whom people connect and interact on passion-centric social network sites. In their review of social network sites, boyd and Ellison (2007) asserted that passion-centric social network sites predominantly support interaction between strangers who have no offline relationships. A further contribution of this study is to provide empirical support for this assertion about strangers, which constitutes a crucial difference between passion-centric social network sites and friendship-driven social network sites, where people usually keep in touch with their offline contacts.

As discussed in the community theme, one reason for this difference in passion-centric social network sites was that many participants felt geographically and socially isolated offline. Thus, they used the passion-centric social network site to establish contact with a wide range of people sharing the same passion, similar as on passion-centric social network sites like DeviantArt (Comber, 2009), Dogster (Golbeck, 2009) and YouTube (Harley & Fitzpatrick, 2009; Rotman et al., 2009). Some participants developed online their online relationships further to different environments online and offline, which underlined the strength of passion-centric social network sites to initiate ongoing relationships.

Participants who already had a strong offline network of peers rarely used the website to keep in touch with their offline contacts. People who personally knew other users added them as friends online, but their online networks were neither limited to such contacts, nor did these contacts have more significance than pure online contacts. The main significance of online contacts in this study was to provide information, empathy, and appraisal, which were critical for their passion but did not rely on pre-existing offline contact. This finding differs from studies of Flickr, which show that some people use Flickr primarily to exchange photos and to keep in touch with people they know in person (Ahern et al., 2007; A. D.

Miller & Edwards, 2007; Van House, 2007). These activities on Flickr may reflect friendship-driven online participation rather than interest-driven online participation (Ito et al., 2009), similar to friendship-driven social network sites (Ellison et al., 2007; Lampe et al., 2006). However, the findings of this study suggest that passion-centric social network sites are rarely used to keep in touch with people one knows offline, but rather to exchange resources with strangers that help them to develop their passion.

4.6.2 Passion-Centric Activities Combine Aspirations and Sacrifices

The second sub-question of this study was concerned with the activities that passion-centric social network sites support as well as with the motivations behind these activities. The findings illustrated that these activities often related to aspirations, like the development of skills, social connections, and recognition. In line with the dualistic model of passion (Vallerand, 2008, 2010; Vallerand et al., 2003), all these activities also pointed to sacrifices that people faced in the pursuit of their aspirations.

The tool theme showed that bodybuilders aim to improve their performance, primarily in order to win competitions. In pursuing this goal, they faced their limitations, like how much weight they can lift, or how strict a diet they can persevere while staying healthy and muscular. Thus, tool uses were motivated by the desire to maximise their achievements, combined with minimising the risks and sacrifices when people overstepped their personal limits.

The community theme illustrated the desire to be better connected with one's peers. Passion-centric social network sites supported this activity and allowed them to connect with other bodybuilders and to exchange support. However, strengthening bonds with other bodybuilders online also reinforced their separation from people who did not engage in the same activity and could not relate to the values shared by bodybuilders, like the bodies they aspired to and the demanding nature of their training and diet. Thus, community activities were motivated by the desire of belonging to a community that shared the same values as well as by the misunderstandings and stereotypes that bodybuilders faced in interactions with the general public.

Finally, the theatre theme highlighted both the devotion of bodybuilders for their sport as well as their dependence on it. Bodybuilders sacrificed time, money, and even their jobs, but they enjoyed the experience of competing, and they received valuable recognition from their peers. These pleasurable experiences and the recognition from others also inherited a risk of

developing dependence to the activity. As indicated by Vallerand and colleagues (2003), some people may not stop engaging in bodybuilding when positive experiences fail to occur or when the passion creates tension with other aspects of their lives. Thus, while theatrical participation was motivated by positive feedback and recognition, passion-centric social network sites may also facilitate dependence on an activity.

All three themes highlighted that passion-centric activities demand sacrifices and potentially cause conflict with other areas of everyday life, which diverts from the dual concept of harmonious and obsessive passion (Vallerand, 2008, 2010). The activities that I observed in this study demanded sacrifices and created tensions, which diverts from the concept of a harmonious passion. However, while sacrifices were necessary, the activities described in this study did not appear to be out of control either, as suggested by the concept of obsessive passion. Thus, instead of distinguishing between harmonious and obsessive passion, the findings of this study suggest that passion may be best be described by an ongoing challenge of balancing aspirations and sacrifices.

While previous work examined how passion-centric social network sites support people's aspirations (Lange, 2007a; A. D. Miller & Edwards, 2007), this study also focussed on the influence of passion-centric social network sites on sacrifices. In the following two subsections I will discuss the link between online participation and aspirations as well as sacrifices in further detail.

4.6.3 Benefits of Online Participation

The third sub-question was concerned with the benefits arising from participation in passion-centric social network sites. The tool theme showed that people benefit from passion-centric social network sites in terms of developing skills and knowledge through the exchange of information, comparisons, and progress monitoring. These observations support findings from other passion-centric social network sites on the importance of sharing information online (Blythe & Cairns, 2009; Harley & Fitzpatrick, 2009). They also provide evidence for the assertions by Fogg (2003) as well as by Khaled and colleagues (2006) on the utility of web-based services for monitoring one's progress and comparing oneself with others online in order to help people achieve their goals.

The community theme described how passion-centric social network sites help people to establish a wide range of weak-tie relationships. For some participants these relationships mitigated social isolation from peers offline, in a similar way to what occurs on Dogster and

YouTube (Golbeck, 2009; Harley & Fitzpatrick, 2009). Online relationships on passion-centric social network sites also provided social support, like on health-centred social network sites (Ashkanasy et al., 2009). These connections and interactions provided people with a sense of belonging to a community that shares their interests and values, as on other passion-centric social network sites like YouTube (Rotman et al., 2009), Dogster (Golbeck, 2009), and DeviantArt (Comber, 2009).

Finally, the theatre theme discussed how users of passion-centric social network sites benefit from the attention and recognition they get online. These benefits were similar to the recognition people exchange for one another's work on professional social network sites (DiMicco et al., 2008) and the affirmation through connections with friends on friendship-driven social network sites (Toma, 2010). Some users sought to attention online by proactively promoting their achievements, using strategies like frequent updates and comments to their networks, similar as on YouTube (Benevenuto et al., 2009). However, in contrast to similar kinds of self-promotion on friendship-driven social network sites (Buffardi & Campbell, 2008), the participants in this study argued that self-promotion reflected the time and effort they invested into their passion, rather than narcissism. Mutual recognition on passion-centric social network sites strengthened people's commitment to their activity. The comments on BodySpace were overwhelmingly positive, which diverts from YouTube, where people post positive as well as negative and insulting messages (Lange, 2007b). The lack of negative messages on BodySpace may have been a result of a smaller user base with a more coherent set of values than on YouTube. Furthermore, BodySpace shows all comments posted by a user also on his or her own BodySpace profile, which may have facilitated self-censorship.

The benefits highlighted in these three themes showed that passion-centric social network sites help people achieve their goals and aspirations. However, as I will discuss next, the other side of passion—sacrifices—was rarely discussed on BodySpace.

4.6.4 Limitations of Online Participation

The final sub-question of study 1 was concerned with the limitations of passion-centric social network sites. The findings highlighted two main limitations. First, some participants received unwanted comments on BodySpace that had a sexual undertone. This limitation may stem from the particular context of bodybuilding and its focus on the body as the object of the passion. Bodybuilders shape their bodies in order to compete in bodybuilding shows,

but the physiques of male and female bodybuilders hold also sexual value. In his ethnographic studies of elite bodybuilders in Southern California, Klein (1986) discovered the activity of 'hustling'. Hustling describes the selling of sexual favours of male bodybuilders to gay men, though very few of the bodybuilders who hustled very gay themselves. Similarly, bodybuilders in this study reported that they received comments with a sexual connotation on BodySpace, in the gym, and at competitions. Unwanted sexual comments are also an issue on other social network sites, like Facebook and MySpace (boyd, 2008b; Ybarra & Mitchell, 2008). However, bodybuilding may underline this problem due to the presentation of almost naked bodies in bodybuilding competitions and online.

A second limitation of passion-centric social network sites was that the participants rarely discussed their passion-related sacrifices online. This limitation may stem from two interrelated issues. First, as highlighted in the community theme, participants in passion-centric social network sites shared a similar set of values. While this facilitated empathy and reinforced their aspirations, it also limited opportunities for critical reflection and discussion. Research on friendship-driven social network sites shows that Facebook and MySpace convene discussions between people holding different viewpoints on controversial topics of interest like politics or environmental sustainability (boyd, 2008a; Ellison et al., 2009; Kushin & Kitchener, 2009), whereas passion-centric social network sites appear rather limited in questioning and discussing the values inherent in passion. Therefore, passion-centric social network sites may even further enhance sacrifices, like people's marginal status in society or the risks that people take when they go beyond their personal limits.

The second issue that complicated the discussion of sacrifices was that the predominantly public nature of the passion-centric social network site. This may have facilitated self-presentations that were predominantly positive and left out accounts of sacrifices, self-doubt or any other account that could diminish the reputation of a person. This observation supports previous research on friendship-driven social network sites, which also emphasises the care that people take in crafting their profiles in order to be viewed positively by others (boyd, 2008b; Walther et al., 2008). This may also explain the lack of critical feedback on other people's profiles, because even a critical yet constructive comment may lead to a negative perception of the user. The concern for a positive image in this public setting may be problematic, because if people cannot express their struggles and sacrifices on passion-centric social network sites nor elsewhere, then these websites may exacerbate sacrifices and risks for their wellbeing.

4.6.5 Outliers: Blazing the Trail for Study 2

The findings highlighted similarities between participants, but as discussed in the limitations of the tool use (section 4.5.1), two participants (Bill and Simon) rarely used BodySpace as a tool. Various factors, like connections with peers, their geographic location, or their family status, could have influenced their use of the passion-centric social network site. However, further examination of the data showed that none of these factors were consistent across these outliers and different from the rest of the participants. One similarity that stood out, however, was that both participants were experienced bodybuilders with a professional occupation related to their passion. Bill was a personal trainer and Simon was a physical therapist competing on a semi-professional level, whereas most other participants were amateurs, some of them at the very beginning of their careers (Catherine, Jarvis, and Lenny).

In study 2, I will further examine the differences between amateurs and professionals in their use of passion-centric social network sites in order to account for the outliers in study 1. I will investigate whether aspects associated with the careers of bodybuilders, like performance in competitions, connections with peers, and commitment to the activity, influence participation in passion-centric social network sites.

4.6.6 Critique of Study 1

I embarked on this study as a newcomer to bodybuilding and BodySpace, and thus one critique of this study is that some interview questions in the early phases of the study were very generic and naïve. I tried to mitigate this effect through working out in the gym, reading bodybuilding magazines and interviewing bodybuilders about the sport rather than just BodySpace to gradually develop a basic understanding of the setting of this study. Being an outsider may have been helpful in taking a critical and reflective stance during the fieldwork. However, it took a considerable amount of time to understand the basics of the context bodybuilding before I could make sense of the interactions on BodySpace.

A further challenge was the recruitment of interview participants. Due to the limited number of BodySpace users in Melbourne, I had to extend my recruitment to other locations in Australia and could not interview all participants face-to-face. As suggested by the literature on research methods (Sturges & Hanrahan, 2004), I found that both telephone and face-to-face interviews yielded rich results. However, the three interviews conducted via email were significantly shorter. I decided to include this data in the study because these interviews

provided valuable insights on BodySpace as well as on controversial issues like steroid use and sexual aspects of bodybuilding. Possibly, the anonymity of email conversations allowed these participants to talk about controversial views more freely.

A third challenge for this research was related to the auditability of the findings. As recommended by Miles and Huberman (1994), this chapter and appendix A contain detailed descriptions of the research questions, data collection, and data analysis, in order to make the research process transparent. However, I did not have a second researcher to code the data in parallel to ensure that the findings are reasonably stable across also researchers. I tried to mitigate this limitation through discussions with my supervisors. My second supervisor (Peter Thomas) analysed samples of interview transcripts and fieldnotes during the phase of open coding, and I discussed the data and my interpretations on an ongoing basis in meetings with all of my supervisors.

Furthermore, the understanding of passion-centric social network sites developed in this study was based on a small number of bodybuilders located in Australia. Thus, it has to be interpreted carefully with regards to its applicability to other users of the same passion-centric social network site. The findings may not apply to regular gym users and athletes in other sports. These groups may participate in BodySpace in similar ways, but as discussed in section 4.3, these groups fall outside the scope of this research, because they are generally not passionate about bodybuilding. Beyond that, the interview participants for this study lived in Australia, whereas most BodySpace users appear to live in the USA. I tried to mitigate this limitation through online observations of users all over the world, which produced coherent findings. Still, interviewing bodybuilders in the USA could have lead to different outcomes, possibly showing a different picture of the relationships between bodybuilders online and offline.

Finally, this study of BodySpace served as a case to explore participation in passion-centric social network sites in an inductive manner. However, it was unclear after study 1 whether the findings would also apply to other passion-centric social network sites. As laid out in the research design in the previous chapter, I took up this challenge in study 3 (chapter 7), where I compared the findings from BodySpace with a different passion-centric social network site.

4.7 Summary of Contributions

The following assertions summarise the findings of study 1 regarding the different types of participation in passion-centric social network sites:

1. This study addressed a gap in current understanding of social network sites that are designed to support people's passion (see chapter 2). The findings of this study revealed **three novel themes: tool, community, and theatr**e. These themes describe how people participate in passion-centric social network sites.

2. People use passion-centric social network sites as a **tool to improve their performance** in activities related to the passion. This study supports findings from related work on passion-centric social network sites on the importance of sharing information online (Blythe & Cairns, 2009; Harley & Fitzpatrick, 2009). Furthermore, the findings of study 1 provide empirical evidence for the utility of passion-centric social network sites for people's motivation and progress, as asserted in theory on persuasive technology (Fogg, 2002; Khaled et al., 2006).

3. People use passion-centric social network sites as a **community to establish connections and exchange support with passionate peers**. For some participants online relationships mitigate social isolation from peers offline (Golbeck, 2009; Harley & Fitzpatrick, 2009). As on friendship-driven social network sites (Donath, 2007; Ellison et al., 2007; Lampe et al., 2006), users of passion-centric social network sites benefit from the wide range of connections and the support exchanged online. In contrast to friendship-driven social network sites, connections on passion-centric social network sites are established based on shared activities and values, rather than on offline connections.

4. People use passion-centric social network sites as a **theatre to present a carefully crafted image of themselves online**, in a similar way to what occurs on friendship-driven social network sites (Aguiton et al., 2009; Pearson, 2009; Walther et al., 2008). However, unlike on friendship-driven social network sites, the shared passion provides a focus for what kinds of achievements get presented and find recognition online. The findings show that the feedback users receive is generally positive, which diverts from findings of negative and insulting feedback on YouTube (Lange, 2007b), possibly due to the more narrowly defined passion-centric group in this study and the visibility of all comments on the profile page.

5. The community theme indicates that **people predominantly interact with strangers** on passion-centric social network sites, both casually as well as to develop ongoing relationships. Some people have offline connections with other users. Unlike users of friendship-driven social network sites (Ellison et al., 2007; Lampe et al., 2006), professional social network sites (DiMicco et al., 2008) and even Flickr (Van House, 2007), users with offline connections appear to receive no additional benefits from interacting on passion-centric social network sites.

6. Participation in passion-centric social network sites is motivated by the **combination of aspirations and sacrifices** involved in passion. As a result of the sacrifices, passions are constant sources of tension with other areas of everyday life, which appears to challenge the dualistic concept of harmonious and obsessive passion (Vallerand, 2008, 2010). Unlike previous work in the area of passion-centric social network sites (Lange, 2007a; A. D. Miller & Edwards, 2007), this study illustrated how individuals participate in passion-centric social network sites to manage both aspirations and sacrifices.

7. Tool, community, and theatre illustrate the **wide range of benefits** that people receive on passion-centric social network sites. Often, social network sites emphasise a particular form of support, like weak-tie relationships on friendship-driven social network sites (Donath, 2007; Joinson, 2008), emotional support on health-centred social network sites (Ashkanasy et al., 2009), or recognition on professional social network sites (DiMicco et al., 2008). Passion-centric social network sites integrate all of these benefits and thereby support people's aspirations.

8. Users of passion-centric social network sites generally lack offline connections with other users, unlike users of friendship-driven social network sites (Beer, 2008b; boyd & Ellison, 2007) and professional social network sites (DiMicco et al., 2008). However, the tool, community, and theatre themes illustrate how online participation is **deeply entwined with activities and social processes offline**, despite the lack of offline connections with other users.

9. Some users of passion-centric social network sites receive **unwanted comments,** like comments with a sexual undertone, similar as on friendship-driven social network sites like MySpace and Facebook (boyd, 2008b; Ybarra & Mitchell, 2008).

10. Users of passion-centric social network sites people share similar values, which **limits opportunities for critical feedback and discussion**. The lack of critical discussion may increase people's sacrifices and even nurture obsessive behaviours.

This finding diverts from social network sites like Facebook, where people with differing interests and viewpoints engage in discussions of controversial topics like politics and environmental sustainability (boyd, 2008a; Ellison et al., 2009; Kushin & Kitchener, 2009).

4.8 Conclusion

The aim of this chapter was to develop an understanding of different types of participation in passion-centric social network sites. The findings of a case study of BodySpace showed that people use passion-centric social network sites as a tool for instrumental purposes, as a community to socialise with strangers online, and as a theatre to promote their achievements. Participation online was motivated by the combination of aspirations and sacrifices in people's passion. Interacting with like-minded strangers on the passion-centric social network site helped them to pursue their aspirations and to address some of the sacrifices in their passion. On the other hand, participation in passion-centric social network sites also showed limitations, most notably the lack of critical and constructive feedback. Such feedback would be important to address potential risks and to mitigate sacrifices in order to pursue passion in a more harmonious way.

This chapter illustrated the importance of passion-centric social network sites for passion, and beyond that, it also showed how central passion is to people. Passion influenced how people invested their time and money, the personal relationships they established, and how they viewed themselves. Most participants pursued their passion in their leisure time, but the findings indicated that some also aspire to turn their passion into a professional occupation. Thus, I will explore the different passions and online practices of amateurs and professionals in further depth in the next chapter.

Chapter 5

Study 2: Careers and Passion-Centric Social Network Sites

5.1 Introduction

The last chapter described study 1, which established an understanding of the different kinds of participation that passion-centric social network sites support. However, the findings of study 1 also included outliers, which indicated that people who have turned their passion into a professional occupation may use these sites differently from amateurs.

This chapter describes study 2, which examined the differences between amateurs and their professional counterparts in further depth. Building on the outcomes of study 1, study 2 investigated how participation in passion-centric social network sites supports the careers of amateurs and professionals. It sought to refine the tool, community, and theatre themes from study 1 to account for differences in the online activities of amateurs and professionals.

Section 5.2 of this chapter outlines the aims and the research questions guiding study 2. Section 5.3 provides details on the chosen case of BodySpace users in California while section 5.4 presents details on the fieldwork approach. Section 5.5 describes the findings, showing the differences between people at different stages in the development of their passion. Section 5.6 provides a discussion of the findings to address the research questions. It includes a critique of the study and discusses open issues arising from this research. Section 5.7 summarises the contributions of study 2, while section 5.8 concludes this chapter and sketches the way forward to the next chapter.

5.2 Objectives

Building on the findings from study 1, the overall aim of this study was to in order to investigate the differences between amateurs and professionals on passion-centric social network sites. To address this overall aim, I first needed to explore how passion develops from an amateur activity to a professional occupation. A further aim was to combine the development of passion with the tool, community, and theatre themes from study 1 in order to describe the different benefits and limitations of passion-centric social network sites for passion-related careers. The research questions guiding study 2 were:

Research question 2: In what ways does participation in passion-centric social networks sites facilitate the development of passion?

- What are the critical stages in the development of passion?

- What are the benefits of passion-centric social network sites for developing passion?

- What are the limitations of passion-centric social network sites for the development of passion?

5.3 Case for Study 2: BodySpace Users in California

To address the above research questions, the case for study 2 needed to include a passion-centric social network site with a group of users at different stages in the development of their passion. The development of passion can be a lifelong process (Stebbins, 2007), and therefore (as discussed in chapter 3) I studied the development of passion through a cross-sectional approach of looking at people at different stages in the development of their passion, rather than through a longitudinal approach.

I continued the fieldwork in the context of BodySpace, focussing on different kinds of bodybuilders, from beginners to experienced professional competitors. The advantage of staying in the context of BodySpace was that I knew this context very well, which allowed me to further expand the understanding of participation and passion developed in study 1.

The aim of this study was to expand the understanding of passion-centric social network sites from beginners and amateurs to professional bodybuilders. Thus, I had to recruit new participants and change the location for my fieldwork in order to get access to more professional bodybuilders. I carried out the main part of the fieldwork for this study in

California, because professional bodybuilding originated in Southern California, and to date it is the cultural and commercial centre of the bodybuilding world (Hotten, 2004; Klein, 1993). The most prominent place is the so-called 'Mecca of Bodybuilding' at Gold's Gym, Venice, where most professional bodybuilders including Arnold Schwarzenegger used to work out. The bodybuilding documentary 'Pumping Iron' (Butler & Fiore, 1977) featured Schwarzenegger's bodybuilding career and made him and Gold's Gym famous within the bodybuilding world and beyond. For decades, the high density of professional bodybuilders and the potential access to bodybuilding magazines and food supplement sponsorships in Southern California have attracted aspiring professional bodybuilders from all over the world (Hotten, 2004; Klein, 1993).

5.4 Study 2 Fieldwork

I used a multi-method fieldwork approach to study how bodybuilders at different stages of their passion-related careers participate in BodySpace. The fieldwork lasted from September 2008 to April 2009 and focussed on bodybuilders and BodySpace users in California. Although I spent only one out of the eight months of fieldwork in California, I collected a large share of the data during my stay there, and after my return to Australia I conducted follow-up interviews via telephone with the participants from California.
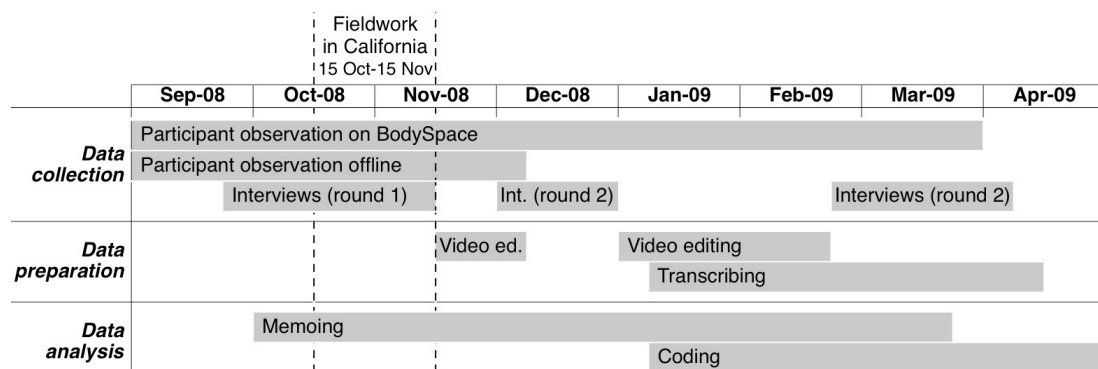
Figure 5-1: Timeline of data collection, preparation, and analysis during study 2.

Figure 5-1 shows that the fieldwork consisted of three overlapping phases to collect, prepare, and analyse data. After obtaining ethics approval, I started data collection using participant observation on BodySpace and in offline settings, like gyms and bodybuilding competitions. I conducted interviews with bodybuilders at different stages of their careers to discuss their BodySpace use. I filmed all interviews and I used edited video clips in the second round of interviews to discuss with the participants how their passion developed and the role of

BodySpace for this development. Data analysis was based on 'memoing' (Birks et al., 2008) and iterative coding (Neuman, 2006), guided by the findings of study 1. I will discuss all three phases of study 2 in more detail in the following subsections.

5.4.1 Ethics Approval

Prior to commencing data collection in study 2, I applied for ethics approval from the University of Melbourne. Appendix B contains the key documents of this ethics amendment to make transparent how I planned this research and what information the potential study participants received. This appendix contains the plain language statement (see appendix B.1), the study website (see appendix B.2), and a list of initial interview questions for this study (see appendix B.3). The University of Melbourne's Human Research Ethics Committee formally approved study 2 under the reference number 0719402.3 on 1 September 2008.

5.4.2 Data Collection and Preparation

Online Participant Observation

As in study 1, I conducted participant observation on BodySpace and Bodybuilding.com throughout the entire time of the fieldwork. This allowed me to harvest this rich source of information without asking for any additional effort from the study participants. Furthermore, I could collect data on a wide range of bodybuilders from beginners to professional athletes as well as from different locations.

I logged into my BodySpace account on a daily basis and observed events in my friends networks, on the BodySpace homepage, and the official news blog of BodySpace, which provides updates on changes of the social network site, user statistics, and awards like 'BodySpace members of the month'. Like in study 1, I collected data relevant to the research questions using ScrapBook, a Mozilla Firefox extension that stores online data on the local hard drive and allows annotation of the data. Appendix B.4 contains a screenshot of the ScrapBook folder to give an overview of the clusters of data that I collected online. I used the online data to guide my interviews and as raw data for the analysis.

Offline Participant Observation

I further conducted observations in gyms and at bodybuilding competitions to deepen my understating of bodybuilding. These observations focussed particularly on the career development of bodybuilders and the differences between newcomers and more experienced athletes in gyms and at competitions.

During my fieldwork in California I visited five different bodybuilding gyms, including the famous Gold's Gym in Venice, the self-proclaimed 'Mecca of Bodybuilding'. In my two visits to Gold's Gym I saw an eclectic mix of regular gym users, amateur bodybuilders, and professional bodybuilders, including the current Mr. Olympia,[11] Jay Cutler.

After my return to Australia, I continued with gym visits and I further watched four bodybuilding competitions. One of these competitions had particular research significance. I visited this competition to watch one of the participants in this study (Paul). Unlike at most other bodybuilding events, I felt very excited—more like a bodybuilding fan than an interested observer. This event highlighted that my perspective towards bodybuilding had changed during this study, indicating not only that I knew more about the sport, but also that I felt more attached to it. As recommended by Hammersley and Atkinson (2007), I included these personal observations in my fieldnotes to remain conscious of how my personal perspective shifted in the course of the fieldwork. Appendix B.5 contains the fieldnotes of the aforementioned bodybuilding competition. The fieldnotes guided my observations online and the interviews, and they served as primary data for my analysis.

Interviews and Film Elicitation

I conducted two rounds of qualitative interviews (Weiss, 1995) with 12 bodybuilders. The first interview focussed on the participants' bodybuilding careers and their use of BodySpace. I videorecorded these interviews and I used edited video clips for the film elicitation method (D. Harper, 2002; Pink, 2007) in the second interview in order to elicit further discussion and reflection on BodySpace and their careers. Furthermore, I used the second interview to carry out 'member checking' (Cho & Trent, 2006) to discuss the findings emerging in this study with the participants.

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[11] The title 'Mr. Olympia' is given to the winner of the Olympia Weekend competition. It is considered the most important title in the bodybuilding world, comparable with winning a world championship or an Olympic gold medal in other sports (Hotten, 2004).

I recruited participants through BodySpace. Searching for bodybuilders in California, both beginners and professional bodybuilders, I created a sampling frame of 89 BodySpace users, and I contacted 69 users who lived close to the places I visited during my fieldwork (San Francisco, Los Angeles, Orange County, and San Diego). They received a short personal message via BodySpace about the aims of this research and a link to the study website for further details (see Appendix B.2 for a screenshot of the study website). 18 BodySpace users replied to my message, and ten of them had time for an interview during my visit to California. I further recruited two Australian participants, who had volunteered to participate in study 1. These two participants allowed me to test and to improve my study instruments before I left to California. Although they lived in a different location than the majority of the participants, their careers and their participation in BodySpace supported the findings from the Californian participants. Table 5-1 lists the pseudonyms, locations and demographics of all 12 participants in study 2.

Table 5-1: Demographics of the participants in study 2. Participants located in Australia are indicated with an *, all other participants were interviewed during my fieldwork in California.

Name	Sex	Age	# Years training	Occupation	Interview 1 mode	Interview 2 mode
Andy	M	30	8.5	Personal trainer, gym manager	Face-to-face	Telephone
Chris	M	30	8.8	Personal trainer, fitness model	Face-to-face	-
Francis	M	30	16.2	Personal trainer, bodybuilding judge	Telephone	-
Jeremy	M	51	38.5	Personal trainer	Face-to-face	Telephone
Juliet	F	47	1.5	Journalist	Face-to-face	-
Keith	M	38	9.1	Teacher	Face-to-face	-
Mark	M	48	23.8	Personal trainer	Telephone	-
Melvin	M	25	9.5	Personal trainer	Face-to-face	-
Nicole*	F	41	2.6	Research scientist	Face-to-face	Face-to-face
Paul*	M	21	4.4	Student	Face-to-face	Face-to-face
Tim	M	43	24.2	Personal trainer, nurse	Face-to-face	Telephone
Wendy	F	23	2.3	Personal trainer	Face-to-face	Telephone

I collected the participants' BodySpace profiles using the Mozilla Firefox extension ScrapBook. The online data contained their profiles, photos, and comments posted on BodySpace. The online data guided the questions I asked during the interviews but also served as raw data for the analysis.

I used the first round of interviews to discuss their careers and their participation in BodySpace. As indicated by the interview questions in appendix B.3, the discussions evolved around the start of their bodybuilding career, their last competition, and their aspirations for the future, combined with their views on BodySpace and its role for competitions and furthering their careers. The interviews took place in their gym or at their office and usually lasted between 45 and 90 minutes. They all agreed to be video-recorded, and I used an audio-recorder as a backup option. As indicated in table 5-1, two participants were temporarily outside California but offered to be interviewed via telephone.

Immediately after each interview, I watched the video and summarised the main discussion points in mind maps. I also wrote short descriptions of all participants to summarise key discussion points as well as observations beyond what was discussed, like the participant's personality. These descriptions and the mind maps helped me to remember each participant during the fieldwork. I did not transfer the mind maps from paper into a digital format, but I listed the participant descriptions in appendix B.6 to complement the information in table 5-1 with textual descriptions.

Upon my return to Australia, I started to edit the video material to create video clips for the follow-up interviews. Using the video editing software iMovie, I created two short video clips for each participant, each lasting between three and five minutes. One video clip described their bodybuilding career from the time they had started up to their plans for the future, and the other video clip contained their views on BodySpace. Similar to documentary films, the video clips consisted of interview statements, introduced by a theme like "how I started to bodybuild" to guide the viewer through the video clip, and photos from BodySpace and the participant's gym. The DVD attached in appendix B.7 contains videos of two participants to illustrate the style and content of these videos.

I combined video editing with the task of fully transcribing all interviews. As illustrated in the fieldwork timeline in figure 5-1, doing both activities in parallel took several months. However, in revisiting the data several times through video, audio and text, I got to know the data very closely before I started the second round of interviews. Appendix B.8 provides excerpts from transcripts to illustrate the kinds of questions we discussed and the richness of the responses.

The aim of the second interview was to discuss the findings emerging in this study regarding the role of BodySpace in the careers of bodybuilders. I used the edited video clips during the interview to reflect on what they had said earlier, and to discuss their use of BodySpace, their careers, and the development of their passion. Since the film elicitation (D. Harper, 2002) was an integral aspect of the method, I contacted only those participants who I had met face-to-face earlier and recorded on video. Out of these ten participants, only six replied to my messages via BodySpace and email and made time for another interview.

I started the second round of interviews with the two Australian participants to test the utility of the videos and their integration into the flow of the interviews. These two interviews were conducted face-to-face, allowing me to show the videos to the participants during the interviews. All other follow-up interviews took place over telephone. These participants received a link to their videos on YouTube[12] to watch them prior to the interview, and we discussed their thoughts on the video and the questions emerging from it on the telephone. As suggested by Harper (2002), the film elicitation technique allowed me to clarify open questions, discuss emerging findings, and better understand the relevance of BodySpace and bodybuilding for their lives. The follow-up interviews lasted between 30 and 50 minutes and I fully transcribed all of them.

5.4.3 Data Analysis

The data analysis built on the tool, community, and theatre themes emerging in study 1. While these themes provided a starting point to understand participation in passion-centric social network sites, the aim of this analysis was to evaluate these themes and to describe the relationship between participation and people's careers. In the following sections I will discuss how I used analytic memos and iterative coding to analyse the following data:

- Fieldnotes from four visits to bodybuilding competitions

- Eighteen interview transcripts

- BodySpace profiles of 12 participants and 9 celebrities, and 129 additional web pages from BodySpace captured during the online observations

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[12] I created separate YouTube accounts for each participant to protect their privacy, and I set the visibility of the videos to private so that other users could not watch them. The participants received instructions on how to log in, watch the videos, and make the videos public if they wanted to publish them on their BodySpace profiles.

Memoing

Qualitative researchers write analytic memos to analyse data on an ongoing basis throughout the entire research project (Birks et al., 2008; Miles & Huberman, 1994). I wrote memos to document how observations, interview statements, and personal ideas in my fieldwork supported, extended, or diverted from the themes from study 1, in particular with regards to their role for the careers of bodybuilders. Appendix B.9 provides an excerpt from a memo on different user groups on BodySpace to illustrate the kinds of concepts that I developed during memoing.

The memos helped me to capture my understanding as it developed throughout the fieldwork, but beyond that, they also served as a means to communicate my research to others. I discussed preliminary themes from the memos with my supervisors and colleagues, and I also gave public presentations while I carried out the fieldwork. Discussing my data and my interpretations with other researches helped me to refine my interpretations and to connect them with theoretical concepts in related literature.

Coding

Coding was different from study 1, because the analysis was based on the tool, community, and theatre themes from study 1 and the memos written in earlier stages of the analysis in study 2. Therefore the emphasis in coding the data shifted from unpacking themes to evaluating them. Guided by the principles of a sensitised approach to grounded theory (Bowen, 2006; Corbin & Strauss, 2008), I inspected the data in an iterative manner to look for evidence that supported or rejected the themes developed in the memos in order to test and refine them.

I conducted my first round of coding in conjunction with the transcription of the interviews. I typed the interview transcripts in Microsoft Excel so that I could use one column for the actual transcript and a separate column for codes, annotations and references to ideas in memos and in related literature. Appendix B.8 provides excerpts from interview transcripts to illustrate how I coded and annotated the text. Opening up transcribing from a predominantly mechanical activity to an analytic activity consumed more time, but it allowed me to capture analytical concepts immediately and in a much more flexible manner than in NVivo.

Immediately after transcribing, I imported each transcript including the open codes and annotations into NVivo. I started coding in NVivo with the codes established in study 1, and I extended them guided by the annotations and codes in the annotations of the transcripts.

While Microsoft Excel was useful in the first round of coding by allowing me to annotate the data freely, NVivo was useful for consecutive passes through the data. The hierarchy of already existing codes in NVivo provided a structure that forced me to critically examine the data to identify similarities, differences, and contradictions. Similarities allowed me to condense the data. Differences forced me to adjust the codes, and I sought to resolve contradictions through subsequent interviews and through closer examination of the data.

I subsequently imported the fieldnotes from the offline observations as well as the online data into NVivo to compare and contrast the data from different sources. Changes in the codes led me to pass through previously coded data to apply new codes. Thus, I had several partial passes through the data until I had coded all data. The coding process supported the themes from study 1 (tool, community, and theatre) and unpacked four critical career stages—beginners, mentors, aspiring celebrities, and celebrities.

The biggest challenge in the analysis was to establish the relationship between the four career stages and participation in BodySpace during axial coding (Corbin & Strauss, 2008; Neuman, 2006). As described in more detail in appendix B.10, I used a combination of strategies to unpack how passion-centric social network sites influence the careers of bodybuilders and vice versa. First, I used matrix queries in NVivo to display the frequencies of codes in matrices that sort the data by the tool, community, and theatre themes in separate columns, and the different career stages as separate rows. For example, the matrices allowed me to quickly identify all data coded as one of the tool uses for the group of mentors. Second, matrices did not account for instances of data where participants from one group referred to another group, like mentors talking about their participation in BodySpace when they were still beginners. Thus, I examined the data displayed through the matrices to identify instances where people talked about their participation during an earlier career stage and assigned separate codes. Finally, I also examined all data related to BodySpace to identify trends in the data, like the shift from BodySpace to other avenues, and coded them separately. Combining these three strategies, I teased out the differences in the use of BodySpace between individuals at different stages of their career, and more general trends in online participation. In the findings section I will present the four main stages in the careers related to passion—beginners, experts, aspiring celebrities, and celebrities—and their participation in passion-centric social network sites under the tool, community, and theatre themes.

5.4.4 Reporting of the Data

I will use similar labels as in the previous chapter to indicate the exact source of excerpts from the data. For interview and online data from the participants of this study I will use their pseudonym, the data source (interview or profile), the line numbers of the quote in the data source, and the overall number of lines of that document. For example, a quote from lines 466-469 of Paul's second interview (transcript) that contains 1536 lines will be:

> *"I reckon that was one of the best days in my life, just being up there. You work so hard. You train for years, but those last few months of dieting, when you are up there it's like the best feeling of achievement. You feel like a million dollars! It's great!"* (Paul, interview 2/2, lines 466-469/1536)

I will use a similar format for online data from BodySpace and Bodybuilding.com generated by other users. To indicate the source I will either refer to the title of the website, e.g., the official news blog of BodySpace, or I will use fictitious initials for data from BodySpace users who were not interview participants to distinguish them from the interviewees. Thus, a comment left on the profile of a BodySpace user with the fictitious initials A.K., taken from the lines 257-258 of that document, will be:

> *"Always inspiring to see you, in print, online, but my highlight was actually seeing you at the 'O' last year. Big fan!!!"* (A.K., profile, lines 257-258/621)

5.5 Findings

My analysis of the participants' career trajectories highlighted three critical stages as they develop from newcomers to more experienced bodybuilders, and a forth stage that none of them had achieved but many aspired to. Each stage was characterised by different aspirations and sacrifices. This indicates that passions do not simply develop in a linear fashion, but that each stage in the development of passion marks a qualitative difference in the combination of aspirations and sacrifices:

1. *Beginners*: This group contains people at the beginning of their competitive bodybuilding career. The first competition has particular significance because it legitimises them as 'bodybuilders' who endure the enormous physical and mental challenges of the preparation and the competition. Participants falling into this group were Keith, Paul, and Juliet, although Juliet was already in the transition towards becoming a mentor.

2. *Mentors:* This group consists of bodybuilders who have competed for several years and use BodySpace and other avenues to pass on their knowledge and passion for the sport. Unlike beginners, they have established lifestyles that evolve around gym workouts and regimented diets to stay in shape. Their aim is to maintain this lifestyle and to develop their identity further. This group contained pure amateur bodybuilders, like Juliet and Nicole, as well as amateur competitors who worked as personal trainers, like Jeremy, Mark, and Wendy.

3. *Aspiring celebrities:* This group is made up of bodybuilders who see competing as a means to achieve fame. Aspiring celebrities are experts in bodybuilding, but unlike the group of mentors, they are also entrepreneurs who aspire to turn their fame in bodybuilding into commercial success. They seek to attract clients for their personal training business, get discovered for photo shoots for bodybuilding magazines, or attract sponsorships from food supplement companies. Participants falling into this group were Andy, Chris, Francis, Melvin, and Tim.

As indicated by the label 'aspiring celebrities', the participants discussed a forth career stage that many of them were aiming for. Although none of the participants in this study actually fell into this group, many discussions evolved around achieving this idealised final stage:

4. *Celebrities:* This group consists of elite athletes, in particular the winners of the prestigious Mr. Olympia competition, like Jay Cutler, Ronnie Coleman, and Dexter Jackson. These very few athletes make a living from price money in competitions, sponsorships, and photo shoots for bodybuilding magazines. The findings in this section are based on online observations of nine celebrities on BodySpace.

These four groups describe important stages in the development of a bodybuilding career. Beyond that, they also entail different practices in the context of BodySpace. My analysis of the data was guided by the understanding of passion-centric social network sites established in study 1. This study supports the findings from study 1 and unpacks further nuances within the themes of tool, community, and theatre.

The following sections will discuss the aspirations and challenges of beginners, mentors, and aspiring celebrities, as well as the relevance of BodySpace for each group. In addition to these three groups, I will also discuss my observations of celebrities on BodySpace. The findings indicated that only very few people reach celebrity status, and their participation in BodySpace appears rather limited. As illustrated in figure 5-2, the findings showed three trends. First, each group focussed on different themes—beginners relied most on tools and community, mentors on community and theatre, and aspiring celebrities on the theatre.

Second, these groups also showed slightly different practices within these themes, e.g., mentors used the theatre to promote their achievements in competitions whereas aspiring celebrities used the theatre to promote their businesses. Finally, my observations and discussions with the participants indicated that participation moves from passion-centric social network sites to other places when people develop from beginners to mentors and beyond, which leads to limited online participation of celebrities.

Main themes:	**Tool**	**Community**	**Theatre**
Beginners:	Main focus on learning	Main focus on establishing relationships	Moderate self-promotion
Mentors:	Moderate tool use, mainly helping others	Main focus on maintaining relationships	Main focus on promotion of achievements
Aspiring celebrities:	Rare tool use	Moderate participation, mainly business networking	Main focus on promoting a business
Celebrities:	No tool use	Rare community participation	Moderate theatre use, mainly self-promotion

Figure 5-2: Variations in participation in passion-centric social network sites based on the themes from study 1: Beginners focus on tool and community, mentors on community and theatre, and aspiring celebrities on theatre uses. Celebrities seem to participate only rarely in passion-centric social network sites.

5.5.1 Beginners

The group of beginners consisted of participants who had recently started to compete in bodybuilding shows and had thereby made the transition from gym users to competitive bodybuilders. As discussed in the previous chapter, this transition is significant because all bodybuilders have to go through the so-called 'hell of preparation' in order to get into competition shape. During this time they keep up or increase their training load whilst they starve in order to reduce their body fat levels. The beginners in this study had proven that they can endure the 'hell of preparation', but their main challenge was to maintain a lifestyle that evolves around training and a strict diet. This challenge was best illustrated in the case of Paul, a 21-year-old student in his final year at university. I first interviewed him two weeks prior to his first competition, when his whole life evolved around training and dieting for the competition:

> *"It helps so much when you compete—your training just steps up another level. As soon as I decided and locked it in what I'm gonna do, I never missed a meal, never missed a workout, stopped drinking beer, and started focussing on the training." (Paul, interview 1/2, lines 286-289/1214)*

I watched Paul's competition and saw him in excellent shape on stage. Even within the two weeks after the interview he managed to drastically transform his physique, and despite his diet, he appeared full of energy and won the best poser award. When I met him for a follow-up interview one month later, he had not only lost his excellent physical shape but also his commitment to training and diet. He had just cancelled a training session with his training partner, because he did not feel motivated: *"At the moment I'm just enjoying living normally and not thinking about the gym all the time and things like that, but I'm planning on getting back into it." (Paul, interview 2/2, lines 712-715/1536)* At the time of this writing, more than a year after our interview, Paul's BodySpace profile showed no sign of a comeback.

The other two beginners in this study also highlighted the challenge of maintaining a bodybuilding as a lifestyle, yet their attempts were more successful. Keith competed once in 2003. He had maintained a healthy lifestyle based on regular training and a healthy diet, although he did not want to go through the phase of competition preparation any more. Juliet had competed only for a year, yet she was already in the transition from beginner to mentor, helping other women in the gym to get in shape and to compete.

Beginners used BodySpace mainly as a tool to prepare for their first competition, as well as a community to get support for their lifestyle and to develop their bodybuilding identities further. Theatre activities were less visible in this group.

Tool to Develop Skills

Beginners are the main beneficiaries of using BodySpace as a tool. As discussed in the previous chapter, beginners use BodySpace as a tool to find information, monitor their progress, and compare their progress with others, which helps them to develop their skills and to stay motivated during the competition preparation. The quote below indicates the value of other people's BodySpace profiles and articles on training and dieting, which are critical sources of information during the preparation for the first competition. Such information, often drawn from more experienced bodybuilders, helps beginners to become experts on nutrition and training, and their effects on the body:

> *"Basically—and it might sound like cliché—everything that I need like competitor information, supplements, communications and all that—it's a one-stop place where I find everything. And the people that write articles, I can trust in the variation and decide what's right and what's wrong." (Paul, interview 1/2, lines 101-106/ 1214)*

Figure 5-3 shows one of the progress pictures that Paul posted while preparing for his first competition. He used progress pictures on BodySpace to monitor his development and to compare himself with other users, similar to the participants in study 1. His comments also confirm one of the limitations discovered in study 1—the lack of critical feedback on BodySpace. Paul edited this photo to point to different body parts he wanted to improve for the upcoming competition. Putting the edited photo on BodySpace, Paul was hoping to get critical feedback on his current state and which parts he needed to improve to attain a strong and balanced body. However, the feedback he received was only positive, which provided motivation, yet confirmed the limitation of BodySpace as a tool to get constructive feedback:

> *"I posted a progress pic—there is one that I posted and it had like all of my trends from 2008. I did it in Photoshop, things like bring up shoulders and change pecs. I submitted it to see what other's reaction was . . . I didn't get too much information out of it. People aren't very critical on it because it's more designed to motivate you. The people that comment, they are just like, 'looks fine already, you don't need to make changes', or others said, 'it looks good'. It didn't really work for me.*
> [Interviewer] What sort of feedback would you have wanted?
> *I would have wanted something like 'You're doing well with your shoulder but maybe try and change this part'. More sort of constructive—but there was more like, 'good stuff!'" (Paul, interview 1/2, lines 111-146/1214)*
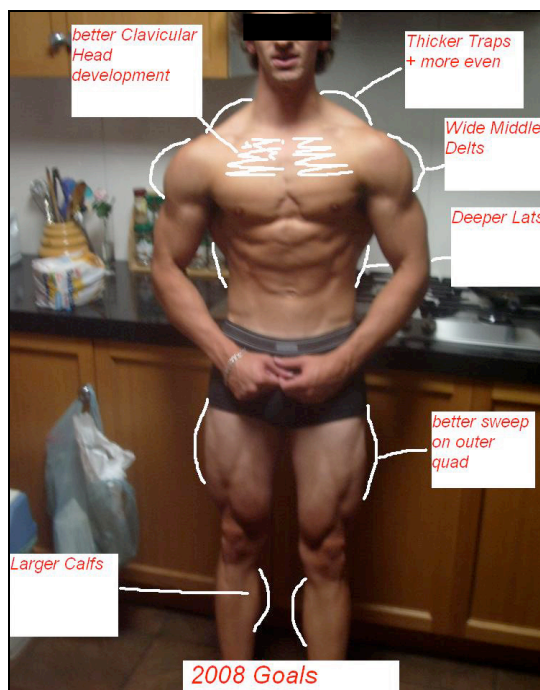
Figure 5-3: Beginners use photos to present their goals and to ask for critical feedback on their progress. However BodySpace appears limited in facilitating critical, constructive discussion (photo of Paul, profile, line 559/725).

Community to Establish Relationships with Peers

> *"I can't get my regular friends to go to a figure show or to the Olympia. They would say, 'no way!' So you need to have those people, and the best way to do it is through BodySpace or something where you are corresponding. And you have something in common, and it's that commonality that really links you. Because it's the kind of industry—I have friends that are really fit, but they would never go the Olympia, it just doesn't make sense to them. I love bodybuilding now! I think it is just the coolest thing alive. My friends are like 'she is a little bit [crazy], maybe it's a middle-life crisis'." (Juliet, interview 1/1, lines 290-310/1181)*

Beginners are newcomers to the bodybuilding scene. They usually have only few connections with other bodybuilders, whereas the majority of their friends are not into bodybuilding and thus cannot relate to their interest in bodybuilding competitions, as indicated in the above quote by Juliet. Thus, BodySpace plays a pivotal role as a community for beginners to establish relationships with other bodybuilders and to develop their bodybuilding identity. As discussed in the previous chapter, the relationships with other

bodybuilders on BodySpace help them to exchange emotional support and to develop a sense of the values underlying this community.

Like in study 1, beginners used BodySpace to establish contacts with other bodybuilders. The beginners indicated that most of these relationships were purely online relationships: *"I think I got around 58 friends on BodySpace, but probably no one I know personally" (Paul, interview 1/2, lines 1067/1214).* However, Juliet also reported that she had some BodySpace friends that she got to know online and later met offline at competitions, and who she described as her 'community':

> *"You meet a lot of people who live in your area and you meet actually at a show. So the first show I was in, I was 'Oh, you are this person. Oh, you are that person!' We knew each other by our BodySpace names. Even if you are a beginner and you go into a show, you already got a community of friends that you've been corresponding with, and talking to, and chatting with, and offering hopes for months." (Juliet, interview 1/1, lines 266-271/1181)*

As indicated by Juliet's quote, BodySpace friends allow beginners to socially engage with others in a similar situation and to exchange support. The key factor in the support online is the other person's ability to empathise with challenges during the preparation for a competition. The sense of empathy is particularly important for beginners, because unlike more experienced bodybuilders, they are usually not well connected with other bodybuilders. Bodybuilding may highlight the problem of social isolation for beginners, because it is both an individual activity and a minority sport. Unlike in football or volleyball, where people share their experiences with their team members, and unlike running or tennis, which are individual activities but more mainstream sports, the beginners in this study knew very few others competitors with similar goals and values. Thus, passion-centric social network sites may be well suited for individual niche-activities to help beginners develop their skills and identity. Unlike friends or partners who are not into the same activity, other users of passion-centric social network sites can relate to challenges, like the strictly regimented diet in bodybuilding:

> *"There are not a lot of people in regular society that can relate to what is going in the preparation for a competition. The diet is really socially awkward. You have to have your meals, usually five times a day, to make sure you are eating every two to three hours. You have to measure everything prior, and you have to take your food with you. If you want to do a show, then there is no room for missing a meal or eating too much of one thing. And you have people all the*

> *time, 'come on, you are in great shape, you can have one slice of pizza!' And it's*
> *really easy to hear that and say, 'you are right'. But if you want to do a show,*
> *you got to stay strict. BodySpace is a space to talk to people who do the same*
> *thing and they can say 'I had the same thing happen'. You can help each other,*
> *that's what it is about, more than anything."* (Keith, interview 1/1, lines 717-
> *729/815)*

Theatre to Present First Achievements

> *"I reckon that was one of the best days in my life, just being up there. You work*
> *so hard. You train for years, but those last few months of dieting, when you are*
> *up there it's like the best feeling of achievement. You feel like a million dollars!*
> *It's great!"* (Paul, interview 2/2, lines 466-469/1536)

One of the biggest accomplishments and a major milestone in any early bodybuilding career is the first competition. When Paul stepped on stage to show the enormous transformation of his body, he proved that he could endure the challenges of the preparation phase. As Paul's quote indicates, this accomplishment was very important for himself, but beyond that, it was also an achievement with regards to his relationships with other bodybuilders, because it meant that he had become a competitive bodybuilder.

When I sent Paul the photos that I took of him during his competition, he uploaded them on BodySpace. Like the participants in study 1, he used BodySpace as a stage in a theatre to promote his achievements to a wide audience. And also similar to the findings of study 1, other BodySpace users recognised the value of such achievements in competitions, and they responded to them with comments and messages. Paul received appraisal like *"CONGRATS!!! Be proud of your accomplishment." (Paul, profile, line 794/804)*, which reaffirmed his ambitions. Other beginners in this study confirmed the importance of BodySpace as a theatre:

> *"Being able to have a photo for me is really an accomplishment. Having a*
> *photo of me on BodySpace, it's a nice accomplishment to have that."* (Keith,
> *interview 1/1, lines 480-481/815)*

While the beginners used BodySpace as a theatre, the data indicated that the theatre use was less important for them than the community and tool uses. One reason may be that their careers were at a very early stage and that they did not yet have that many accomplishments to share. Another reason may be that their motivations were still developing and changing.

For example, prior to his first competition Paul wanted to compete to show to himself that he can do it: *"It's a more personal thing when you are up there. I don't care if they beat me or I beat them. It's just getting up there, it's a personal challenge." (Paul, interview 1/2, lines 406-407/1214).* When I interviewed him after the competition, his aim was not to compete for himself anymore, but to demonstrate his abilities to others and to win:

> *"I want to win! That's my new goal. I changed my BodySpace thing—it's like a comment, and I just changed it. It used to be like 'get to 90 kilos of muscle and four per cent body fat', now it's like three words ' to come first' . . . You get hungry, you want to win. Your standards change, everything changes. I don't know if it's a good thing. When I did the first show I just wanted to have fun. Now it's getting competitive, and I'm afraid if I don't get first, I may just be disappointed." (Paul, interview 2/2, lines 532-556/1536)*

5.5.2 Mentors

> *"It's not about the money for us—it's about changing people's lives . . . We do that because we are passionate about it. And we want others to be passionate about fitness and health as well. Whether they want to get into figure or bodybuilding, or they just want a healthier lifestyle." (Wendy, interview 1/2, lines 75-81/994)*

Mentors wanted to share their passion for the sport with other people. For instance, Wendy started to work out in the gym in order to lose weight for her wedding. When her husband went to war in Iraq, she got more serious about her gym training to gain control over her life during that difficult period. During that time she met a personal trainer who helped her to transform her lifestyle and ignited her passion for fitness training. Since then she competed regularly in fitness competitions, and her passion also led her to take up a job as a personal trainer in order to help others to develop a healthy lifestyle too.

Like Wendy, all of the participants in this group had other bodybuilders that had helped them to start their careers, and now they wanted to pass on their own experience in training and competing to help beginners. While Wendy, Jeremy, and Mark mentored others as personal trainers, Juliet and Nicole had jobs that were not related to bodybuilding (journalist and scientist). Despite the differences in their professional activities, they all participated in BodySpace in similar ways. They used BodySpace as a tool to help others, as a community

to develop their relationships with other bodybuilders further, and as a theatre, where they served as role models for beginning bodybuilders and other fitness enthusiasts.

Tool to Help Others

"You want to help other people see the benefits from it and get the same amount of love that you have for the sport, and you want to help fuel that for them as well. I remember when I started out, I just spent hours and hours online, trying to soak up as much information as I can. I remember that and how exciting that was for me. To see people that are in that first beginning stage, that have that same excitement, it gets me excited too. It reminds me about that. It's just like reminding yourself of when you were a kid something that you loved to do. And you want other people to feel the same way that you did then. I think that is why I go on BodySpace and help others as well." (Wendy, interview 2/2, lines 410-428/678)

Mentors like Wendy saw BodySpace as a tool to help others rather than for their own competition preparations. Unlike the group of aspiring celebrities, the mentors reported that they replied to questions that they received from other BodySpace users. Furthermore, mentors encouraged people that they supported in the gym to start using BodySpace to get information and motivation, like they did when they were beginners. Juliet even went so far, that she strongly encouraged all women that she helped to post their progress photos on BodySpace to publicly admit their lack of fitness:

"I have people that I'm helping . . . and I don't charge them, I just do it because I want to help people because it's important to me. And I always say 'when you do this, I want you to get a BodySpace profile and you start publishing your pictures there.' The first thing they say 'there is no way I put my, no matter what, up there.' And one girl, she has 250 pounds, she took her pictures, and I told her: 'You need to face it. I see what you look like, you have to be honest. This is what you look like. And when you look at it, this is really gonna motivate you. When you see this picture of you in 2 years with 250 pounds in a bathing suit. When you watch your body transform, and you do this without pictures, you are never going to see the progress.' . . . That's my little one thing, they got to do it. To me it's almost like when you are in alcohol anonymous you have to admit that you are alcoholic. Here you have to admit that you are fat." (Juliet, interview 1/1, lines 866-899/1181)

All of the participants in this group used the progress pictures also for themselves. However, my observations indicated that they appropriated this feature as a theatre to present their accomplishments in competitions rather than as a tool to track their progress, which I will discuss in further detail in the theatre section. Some mentors also tried to use BodySpace as a tool for their own progress, but they did not get desired outcomes. For example, Jeremy put his goals and his progress photos on BodySpace to make them public and to feel accountable to other users. However, he did not get the responses that he expected on BodySpace, partly because he was not proactively communicating with people on BodySpace: *"No, I'm not really looking actively, going out there—I pretty much check to see if I have any comments and I respond to them." (Jeremy, interview 1/2, lines 519-520/734)* Due to his limited engagement with other BodySpace users, he also received very few responses and concluded that BodySpace may not work as a tool for him: *"I'm trying all the things that it has to offer. I'm putting the progress pictures on, and I put my videos on. I put the latest photos from my last show on, I'm trying to use all of it to help me be my best, whether it works or not, I'm not sure." (Jeremy, interview 1/2, lines 719-723/734)*

Furthermore, most mentors saw the information on BodySpace as less useful than information from other sources. The participants in this group acknowledged the quality of the articles of Bodybuilding.com. However, they did not ask other BodySpace users questions to improve their own training regimes. They rather relied on information gained through their education and work as personal trainers, articles in bodybuilding magazines, and advice from trusted colleagues in the gym:

> *"With dieting, there was a gentleman in Houston—Keith—who was phenomenal. He did my diets for me, and I never failed to nail that very lean body, you know four per cent body fat. And I always did well, became first or second in every show" (Jeremy, interview 1/2, lines 309-311/734)*

> *"As far as training, I learn from other bodybuilders. I don't really need that [information on BodySpace]. I'm usually giving that." (Mark, interview 1/1, lines 320-321/ 477)*

Community to Maintain Relationships with Peers

> *"Overall people on BodySpace are very positive and supportive. They tend to have already been where others are going and appreciate the processes that others are going through, knowing that they have to do the sacrifices and the hard work to improve themselves." (Mark, interview 1/1, lines 409-411/477)*

The group of mentors was better connected with other bodybuilders than the group of beginners. Due to their experience in training and competing, all of the mentors reported that they had connections with other bodybuilders in their gym. Still, they used BodySpace to extend their connections with other members of the bodybuilding community. As indicated by Mark's quote above, mentors participated in BodySpace to interact with others who could relate to their lifestyles and aspirations. Similar to the participants in study 1 and the group of beginners in study 2, the mentors reported a sense of social isolation and a lack of understanding from non-bodybuilders. Especially participants with jobs unrelated to bodybuilding tried to keep their bodybuilding activities secret from their colleagues. For instance, Nicole, an associate professor at a large university, felt that her muscular appearance affected the relationships at her workplace adversely:

> *"When you get closer to competition . . . your shoulders get big and your biceps and triceps start to bulge out of your business shirt and I'm forever trying to hide it. I wear a lot of scarves at work, usually to [hide the muscles], you know, because otherwise men find you a little intimidating to some degree." (Nicole, interview 1/2, lines 580-583/1168).*

Also the personal trainers, who spent a large share of their time in the gym, reported that bodybuilding often complicated their relationships with non-bodybuilders. They participated in BodySpace to engage with others who could empathise with their challenges, like the strict diet during the preparation for competitions, similar to the group of beginners:

> *"When you are competing and you are dieting down, it is very, very hard for you and the people around you. I would say I use it [BodySpace] a lot more at that point, because the people on Bodybuilding.com and on BodySpace understand what I'm doing." (Wendy, interview 1/2, lines 180-184/994)*

Some personal trainers also used BodySpace to keep in touch with their clients and to support them in between training sessions. For example, Wendy received valuable support from other BodySpace users when she started her bodybuilding career, and she also encouraged her personal training clients to use BodySpace to get immersed in the bodybuilding community and to develop the same passion that she has. On BodySpace, Wendy got a sense of her clients' wellbeing, and she provided them with support in between training sessions:

> *"Right now, I'm using it more to check on my clients that use it. I have a look at their blogs and see how they are feeling. I have most of my competitors do a journal and that includes their diets, their training, and also how they feel,*

because I want to know how they feel when they are training, if they have
energy, if they have the motivation for their workout." (Wendy, interview 2/2,
lines 611-619/678)

The collaboration of personal trainers and clients on BodySpace provides opportunities for ongoing support. However, the participants reported that clients find training and diet information on BodySpace that contradicts their trainer's advice, which may diminish the client's progress or even damage their health. Thus personal trainers need to explain how online advice relates to the training of a client. Otherwise, participation in BodySpace may also impede the collaboration between personal trainer and client in the gym:

"Sometimes I can get undermined and my clients say 'I read this on this
magazine, and this is contradictory to what you said'. And then I have to explain
why I'm doing it the way I'm doing it . . . It can happen on BodySpace. I've had
clients that have gotten advice from their friends. I've had a client and his friend
told him not to do cardio any more, because 'bodybuilders don't do any
cardio'." (Wendy, interview 1/2, lines 725-731/994)

Theatre to Gain Appreciation

"When I started I often used them [the progress pictures]. But now I don't, I
usually just post pictures at the shows." (Juliet, interview 1/1, lines 778-779/
1181)

As indicated in the section on tool use, most mentors appropriated tool features like the progress photos for theatrical uses. All of the participants in this group had progress photos on their BodySpace profiles, yet as indicated in the above quote, they were primarily used to promote achievements in competitions or from professional photo shoots. Mark reiterated this view, stating that the progress pictures had no functional value for him, because his improvements would not be visible in this feature. Nevertheless, he uploaded his photos to get attention and feedback from other BodySpace users:

"I get really caught up when I post pictures. I get really nervous. I go there the
next day and check what people say. Sometimes it's funny, because I expect a
good reaction, and then I get back a lot of positive feedback. And of course you
can actually track your workout. They ask you to enter your progress. I haven't
been using that feature as much last year, because you get to the point where
your strength is pretty high and you are not gonna see much progress on the

graph. And also I changed my training slightly to not take the heaviest weight to
stay in form. And so improvement is not really visible on that feature." (Mark,
interview 1/1, lines 346-353/ 477)

As discussed in the findings of study 1, self-promotion on BodySpace helps bodybuilders to get attention from a potentially large audience on BodySpace. Updates of progress pictures and other features appear in the news feed of BodySpace friends, and beyond that, the most recent updates get featured on the BodySpace homepage. These mechanisms are designed to increase the attention and the feedback that BodySpace users get. Even Jeremy, who said that he was not very outgoing on BodySpace (as discussed in the tool section), received appraisal from other BodySpace users for the achievements he presented through photos and videos on BodySpace:

"I got a lot—yeah not a lot—I got a few [comments], mostly guys in their 50's.
And they are interested in following my progress and the pictures that I put up.
And I also put in a little line or two on what I'm doing, what my body fat is,
what I'm eating, and my cardio. I get some feedback, mostly guys at my age who
want to stay in the game. And this is a bit motivating for them. And they put a
good word in for me . . . I motivate them and inspire them." (Jeremy, interview
2/2, lines 396-409/582)

The data from this study also confirms the findings from study 1 that there is virtually no critical and negative feedback on BodySpace. While most comments were positive and encouraging, some participants noted that most comments were shallow and that there was a risk that they possibly reinforce practices that yield no progress or may even be health-detrimental. Still, as indicated by Juliet, most BodySpace users reciprocate comments and try to find something positive about the other thing:

"That's the one thing about it—it's kind of superficial. Everyone looks great
basically. That's what everybody says: 'thanks for the add, you look great!' . . .
That's all people say, but that's what its purpose is. It's just to be supportive, to
motivate you and to make you feel good. Now, if someone doesn't look good, I
wouldn't say it that way. I just say: 'I see the progress, keep it up!'" (Juliet,
interview 1/1, lines 817-832/ 1181)

Finally, the findings of this study also confirmed the observations about unwanted comments on BodySpace from study 1. Men and woman alike reported that some of the comments they received on BodySpace alluded to their sexual attractiveness rather than to their bodybuilding achievements. For instance, Nicole reported that she not only received

ambiguous comments on BodySpace but even a phone call from another BodySpace user who found her work telephone number online:

> *"From being a female on BodySpace, I really like using it to talk to people that are actually training for competitions, and that's why I joined it. But there are obviously guys there who just want to pick you up, or make suggestive comments. And what happens usually is that I wouldn't reply to them. But a guy actually rang me at work about 2 weeks ago . . . He called me up at my office phone here, because he saw me through BodySpace and wanted to chat. To me, that's not acceptable." (Nicole, interview 1/2, lines 1102-1114/1168)*

5.5.3 Aspiring Celebrities

> *"I think I will just stick with my organisation and try to make it all the way to the top. I do have a goal that within ten years I win the Mr. Olympia title naturally." (Andy, interview 2/2, lines 129-130/362)*

Aspiring celebrities competed with the aim to establish a successful career in bodybuilding and beyond. Inspired by Arnold Schwarzenegger and other celebrities in the bodybuilding world, they tried to enter the ranks of professional athletes in order to prove something to themselves and to make an income through price money and sponsorships. Since most aspiring celebrities in this study were self-employed personal trainers, they held the view that the reputation of being a professional athlete would also support other business opportunities, i.e., to expand their client base and to increase their training fees. Some of them also looked for jobs as photo models and actors in Hollywood:

> *"My next goal, as far as I do business things, is to be on a cover of a magazine. What type I don't care, I don't care if it's fitness or if it's bodybuilding. It's still something that people see in the store, and not the 18 and over thing, so on the cover of something involved in fitness." (Melvin, interview 1/1, lines 352-355/1144)*

The focus on business opportunities combined with success in bodybuilding competitions distinguished aspiring celebrities from mentors. Mentors also competed, but their professional careers were not tied up with success in bodybuilding competitions. Some mentors like Jeremy may have had aspirations of becoming a professional athlete in the past,

and young mentors like Wendy may yet develop such aspirations, but at the time of the interviews their primary aim was to share their passion for bodybuilding with others.

The findings of this section are based on the interviews and online data of Andy, Chris, Francis, Melvin, and Tim. While their participation in BodySpace varied from almost daily use (Andy) to once every few weeks (Tim), they all appropriated BodySpace to support their careers as personal trainers and photo models. They had to balance social and commercial BodySpace uses in order to remain respected and well-connected members on BodySpace and to avoid ramifications through the administrators of BodySpace. As posted on the official BodySpace news blog, BodySpace was trying to keep the website free from advertisements of products and services (other than their own):

> *"A Word On Blatant Advertising:*
>
> *Just a friendly reminder to all: BodySpace is not an advertising outlet. We've been getting lots of complaints recently about people spamming via PM for personal training services, recruitment for other fitness networking sites, and websites selling clothing apparel and/or supplements.*
>
> *As per rule #8 in the forum/BodySpace rules, these types of advertising activities are not appropriate. If you happen to own a company that sells stuff, you are, of course, most welcome to use our site. A single link to your website on your BodySpace profile would be appropriate. However, PM'ing your link out in your signature file would not be appropriate, nor spamming your link in profile comments, or actively recruiting customers via our site." (Official news blog of BodySpace, lines 5-16/108)*

Limited Tool Use

> *"Right now I'm training with another pro bodybuilder. His name is Shawn Ray . . . Shawn was in the top five of the Olympia for the last few years, and he is in the bodybuilding hall of fame. When I'm in California I train with him, when I'm in Ireland I train alone. I sometimes go to England and train with Dorian Yates who won the Olympia six times. So I can spend some time with the successful guys." (Francis, interview 1/1, lines 171-177/406)*

Aspiring celebrities rarely used BodySpace as a tool to improve their performance in competitions, because they drew from their own experience or the expertise of their peers. As personal trainers and photo models they were usually fully immersed in the bodybuilding world with strong networks of fellow bodybuilders and personal trainers in their offline

lives. For example, the above quoted participant—Francis—grew up as son of a gym owner and nephew of a national bodybuilding champion. When he moved to California, he extended his bodybuilding network and became the training partner of the former elite bodybuilder Shawn Ray. Francis did not rely on BodySpace as a tool, because Shawn provided him with advice and critical feedback to help him monitor his progress:

> *"He tells you straight in the face how you are looking. Some of the people in the sport with less experience think you look amazing, whereas Shawn tells you, for example, you need more size on one of these muscle groups." (Francis, interview 1/1, lines 259-261/406)*

Unlike mentors, aspiring celebrities rarely provided instrumental support to other BodySpace users. The aspiring celebrities relied on their income from personal training and modelling to make a living, and thus they rarely gave free advice on BodySpace, which delimits collaboration on BodySpace. Those who gave free advice on BodySpace saw this merely as a strategy to attract paying clients for their personal training businesses, which I will discuss in more detail in the theatre section.

Community for Business Networking

> *"You never know who you know. There are some people that I add just in case. To have a contact, that's what those things are for." (Melvin, interview 1/1, lines 421-424/1144)*

Aspiring celebrities were usually well connected with other bodybuilders due their jobs as personal trainers and photo models. Thus social network sites fulfilled a different role in connecting with the community. Aspiring celebrities were less interested in looking for friends that support them with their training and preparation for competitions, they rather used BodySpace to establish relationships with other bodybuilders who work in similar jobs. On BodySpace, they exchanged comments to stay in touch and to coordinate informal meetings:

> *"BodySpace is all about people into fitness, just staying in touch with each other, to meet at the Arnold Schwarzenegger Expo or the Olympia Expo, it's all through BodySpace." (Francis, interview 1/1, lines 204-207/406)*

While these relationships served a social purpose, aspiring celebrities also viewed them as a way to open up new business opportunities. Many aspiring celebrities tried to use their

networks with other bodybuilders to get in contact with photographers and editors of magazines who may hire them for photo shoots:

> *"If you add a photographer and he likes your look, he may come back to you and say 'do you want to shoot with me some time?' or, 'I shoot for so and so, you really should come to our castings and try to see if you could be one of our models.'" (Melvin, interview 1/1, lines 868-871/1144)*

Other aspiring celebrities used their personal networks online and offline to establish relationships with other personal trainers who also ran their own business, in order to share or to pass on personal training clients:

> *"Kaito, from Japan, is back here now . . . And he has asked me if I could give him some clients. So if I have anybody else that I would take on, I would give them to him to train and probably take a percentage of it." (Tim, interview 1/2, lines 1554-1561/1993)*

Theatre to Promote the Personal Business

Like all other groups, aspiring celebrities used BodySpace to present their achievements in bodybuilding shows. They derived important motivation through the comments they received, which helped them to endure the preparation for competitions. Beyond that, Tim, Melvin, and Chris used BodySpace used BodySpace to promote their achievements to attract customers for their personal training business. They received numerous requests for support from other BodySpace users, because their photos and textual information on BodySpace demonstrated the results of years of training. As I indicated earlier, they rarely provided free advice on BodySpace, because they supported others to make a living. However, some of them used free advice to attract potential clients for their personal training business:

> *"People come to me and say, 'you have great abs', or, 'great arms', or, 'how do I get into the business of modelling?' And what I do is that I direct them to my personal website. Or I set up some financial plan for me to either guide them, or do the nutrition for them, something. And I'll be able to charge them for that, or establish some sort of relationship. I'll give somebody a tip there, a teaser, just a little bit of information, just enough to come and ask, 'can I have a little more?' And then you got to say, 'my time is valuable. I can't just do it for free. Let's talk serious, let's talk business!'" (Chris, interview 1/1, lines 229-239/1878)*

Additionally, the participants in this group tried to promote themselves through BodySpace to food supplement companies and magazines for sponsorships and photo shoots. Since such income opportunities were rare, they were aware of the importance of personal contacts: *"They say, it's who you know. You have to have the right connections" (Andy, interview 1/2, line 176/1386)*. They also knew that such contacts were not established merely by winning a competition, but through active self-promotion and networking, as discussed by Chris, a personal trainer and photo model:

> *"I get a lot of modelling from BodySpace. I'm in Iron Man Magazine this month*
> *from BodySpace. I got endorsed by a supplement company, which has*
> *phenomenal supplements, from BodySpace. So I've got quite a few photo shoots,*
> *magazine stuff, supplement stuff, just from the beginning stage of the*
> *BodySpace. But it's all about the networking and the relationships . . . You have*
> *to be on there. You have to be networking, sending little tips in messages that*
> *people, otherwise you are not going to get any feedback at all." (Chris,*
> *interview 1/1, lines 271-303/1878)*
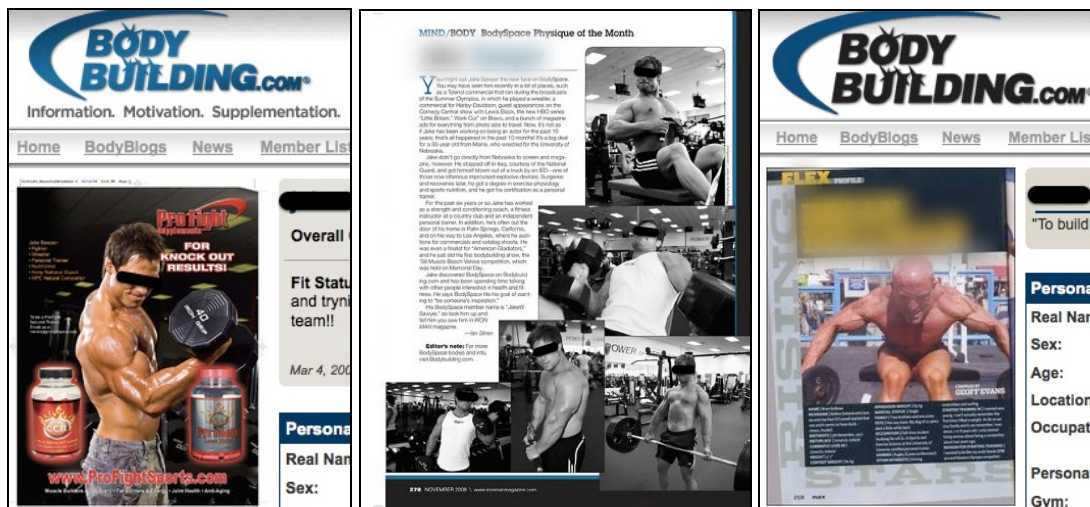
Figure 5-4: Chris presented his sponsor as his profile photo on BodySpace (left) (Chris, profile, line 12/1846), and his Iron Man Magazine article was promoted on the blog of a photographer who works for BodySpace (middle) (T.F., blog, line 109/175). Similarly, Francis used his article in Flex to promote his achievements (Francis, profile, line 7/5277). The presentation of such achievements on BodySpace gives other users the impression that they can also get discovered through BodySpace and gain similar recognition.

Self-promotion on BodySpace appears to create opportunities for photo shoots and sponsorships for BodySpace users like Chris, which sparks imitation by others. As illustrated in figure 5-4, Chris presented an advertisement of his sponsor magazine as his BodySpace

profile photo, and his Iron Man magazine article was featured by a popular blog of the official photographer for BodySpace. Similarly, Francis used his Flex magazine article as his profile photo. Through these self-presentations, other BodySpace users could see what is possible through the social network site and follow their example.

BodySpace appears to be a place to get discovered by sponsors and magazines, yet the impression may be misleading. BodySpace itself recruits users for photo shoots to advertise BodySpace in bodybuilding magazines, but I found no evidence of direct involvement of individuals from magazines or supplement companies on BodySpace. Beyond that, even the recruitment by BodySpace may be unrelated to participation in BodySpace itself. During further discussion with Chris, I discovered that his recruitment by BodySpace was due to his longstanding relationship with the leading photographer of BodySpace:

> *"Originally, he found me as a model. He shot me for a photo shoot. Over a year or two he shot me a few times. And we just kind of started a relationship there. Just from modelling and photography. And over the past couple of years it grew into some friendship as well." (Chris, interview 1/1, lines 1230-1235/1878)*

5.5.4 Observations on Mr. Olympia and other Celebrities

Few bodybuilders actually reach celebrity status, where they compete professionally and are widely known for their achievements. Almost 30 years after his last success in the Mr. Olympia competition—the most important title in bodybuilding—Arnold Schwarzenegger is still one of the biggest celebrities in the bodybuilding world and a role model for many bodybuilders. Due to his successive careers as an actor and politician he is also widely known to the general public. Some of the contemporary celebrities in the bodybuilding scene like Jay Cutler, Dexter Jackson, and Ronnie Coleman have won more Mr. Olympia titles than Schwarzenegger, yet their fame is restricted to the bodybuilding world only (Hotten, 2004). Bodybuilding rarely appears on TV or in other mass media, and as a result, its celebrities earn very little compared to celebrities in mainstream sports like football, basketball, or tennis. Only a few bodybuilders can make a living purely from prize money, sponsorships, and photo shoots. Most bodybuilders remain aspiring celebrities who have to supplement their income through bodybuilding-related jobs like personal training.

This brief section on celebrities is based on online observations of celebrities and discussions with other study participants about their observations of celebrities on BodySpace. The online data showed that despite their financial challenges celebrities very rarely participate in

BodySpace. Though BodySpace is the biggest social network site for bodybuilders, I found only seven of the 46 female competitors and only two of the 23 male competitors at the 2009 Mr. Olympia competition on BodySpace[13]. Even amongst those nine celebrities the levels of participation in BodySpace participation were very low. Only three of them had left comments on other people's BodySpace profiles, and only two had logged in to BodySpace within the month prior to my data collection. The interview participants also shared this observation about the low levels of participation in BodySpace, stating celebrities are *"not on BodySpace—you find some good amateurs, but there are no pro-bodybuilders on it. I haven't found any."* (Paul, interview 2/2, lines 1333-1335/1536).

No Tool use

The data indicated that celebrities did not use BodySpace as a tool. Although celebrity bodybuilders have to work incredibly hard to compete on the highest level, none of the aforementioned nine celebrity profiles used any tool feature like the progress pictures and statistics. The participants explained that celebrities have a team of training partners, professional coaches, managers, and nutritionists to help them accomplish their goals. Having access to expert knowledge on training and nutrition, and being monitored on their progress by their coaches, they do not require social network sites as tools:

> *"When I was getting ready for the show Charles Glass trained me—do you know who he is? . . . Charles trained with Mike Christian. Charles was a pro back in the 80's and he is like a famous trainer now. I think Charles is about a 150 [dollars] up an hour for training, and I know he gets a percentage of what the pros make. He worked for Weider[14] before. Weider paid him to train like Gethin, people like that. He has trained Chris Cormier. He has trained Silvio his whole last year. He trains all the top pros." (Tim, interview 1/2, lines 1185-1195/1993)*

Furthermore, my observations, studies of bodybuilding magazines, and conversations with other bodybuilders suggest that celebrity bodybuilders have access to the latest developments

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[13] Bodybuilding.com lists profiles of famous BodySpace users on http://www.bodybuilding.com/fun/bodyspaceprofiles.htm.

[14] Joe Weider is widely regarded as the most powerful person in the bodybuilding world (Hotten, 2004; Klein, 1993; Lowe, 1998). He founded the IFBB and thereby professional bodybuilding; he is the publisher of the leading bodybuilding magazines, and a manufacturer of fitness equipment and food supplements.

in food supplements and performance-enhancing drugs. Most of the participants in this study competed in so-called 'natural' competitions, which prohibit drug use. Yet the majority shared the view that competing on the level of celebrities would be impossible without performance-enhancing drugs:

> *"As I said before, right now we are talking about the IFBB, which potentially is unnatural, right? And of course I have no right to speculate or assume, but it is true that to achieve a certain size is only achievable through the use of certain drugs. That is not necessarily a bad word in the sport, but it has its stigma with the public." (Andy, interview 1/2, lines 689-693/1386)*

As in other sports, some athletes revert to performance-enhancing drugs to gain further strength. However, bodybuilding is possibly the only sport where the leading organisations do not strictly test for performance-enhancing drugs and thus implicitly accept their use for competitions (Hotten, 2004). Bodybuilders do not use BodySpace to share knowledge on that subject, because anabolic steroids are illegal in most countries, and discussing their use online in a public setting may lead to legal ramifications.

Rare Community Engagement

> *"All the pros trained at 10 am in the morning. And afterwards all the pros go to the Firehouse to eat . . . I would be here every day at 10 to train . . . And Mike would be here, Shawn Ray would be here, just all the top pros would be here all the time . . . In the afternoon, either at four or six at night they would be back training again. Sometimes I wouldn't be here in the afternoon, but Mike and I became really good friends." (Tim, interview 1/2, lines 454-495/1993)*

Due to their strong offline networks, celebrities very rarely used BodySpace as a community. Most celebrities train at Gold's Gym in Venice, CA, the self-proclaimed "Mecca of Bodybuilding". Being immersed in a social world that is made up predominantly of bodybuilders, their offline friends can relate to the challenges they go through and provide the support they need while preparing for competitions. While six out of the nine observed celebrities on BodySpace had accepted friendships, only three of them had left a comment on another BodySpace profile, which shows that they actually used BodySpace to communicate with others in the community. A closer examination of the contents of the 184 comments of these three celebrities revealed that most of them were related to theatrical uses, which I will discuss in the following subsection. Only one of the nine celebrities used BodySpace to keep in touch with other competitors through comments, like: *"Can't wait to see you this*

weekend!!!" (H.R., profile, lines 399-400/1276/), and to encourage others to keep up their trainings or to get into competing:

> *"Start competing. Don't waste time. Each time you compete your body evolves and improves. One of the biggest mistakes people make is NOT competing or taking too much of an off-season. You want to get your 'foot in the door' and get it going."(H.R., profile, lines 534-536/1276/).*

Limited Theatre Use

> *"They do it more for marketing themselves . . . I'm sure they are hearing from everyone around them that they are beautiful, that they are gorgeous, that they are doing a great job. They don't need BodySpace to tell them that." (Wendy, interview 1/2, lines 739-744/994)*

All nine celebrities had received comments from fans on BodySpace. However, six of the profiles appeared rarely used—they had not listed any updates or even visits to their BodySpace profile in the last month. Celebrities generally received comments of admiration like: *"Always inspiring to see you, in print, online, but my highlight was actually seeing you at the 'O' last year. Big fan!!!"* (A.K., profile, lines 257-258/621)*,* appraisals of their achievements like: *"Congrats on the Mr. Olympia victory, you've been untouchable this year!" (T.J., profile, lines 210-211/241),* and occasionally messages to thank the celebrities when they had replied to their initial comment:

> *"Hi:) I was out of my skin excited when I saw your message!!!! I know it is silly but it is like you are not even a real person:) Thank you for taking your time and getting back to your fan club:)))" (M.P., profile, lines 411-412/661)*

The above quote also indicates that fans usually did not expect a reply to their comments. Only three of the nine celebrities left comments on their fans' BodySpace profiles to reciprocate their comments and to promote their personal training businesses and sponsors, similar to the aspiring celebrities. While one of the three celebrities replied to most comments with short messages to thank her fans for their comments and to address their questions, the other two celebrities used the same messages repeatedly for all comments. One of them used the same message in 35 of her 36 comments: *"Thank you so much for the congrats!!! Best wishes!!! [URL personal website]" (A.K. profile, line 582/621).* The other celebrity had four different messages—one to encourage the other user, two to thank them

for their comments, and one to promote her business. She used these messages as a template and customised them with the appropriate user name:

> *"Hi [BodySpace user name]! I am so honoured that you are inspired by me! I*
> *hope I can continue to do so. Loved your comment too—very cool! Maybe I'll*
> *get 2 c u @ a FEM Camp-2010?! [URL] Stay Fit, Love Life & God Bless U!*
> *M.P. 1998 IFBB Fitness Olympia ISSA Certified Master Trainer [URL personal*
> *website, URL personal training business, URL food supplement sponsor]"*
> *(M.P. BodySpace profile, lines 430-433/661)*

These templates appeared to be a workaround for celebrities to communicate with a large number of fans in a short period of time, which indicated that BodySpace may not be well suited to establish a fan base and to communicate with them. The study participants pointed out that most celebrities rather used their personal websites to post news and to engage in discussions with their fans:

> *"I think BodySpace is more for beginners. You don't really see professionals on*
> *there . . . Usually the pros have their own websites. And on their own websites*
> *they have blogs, and you can subscribe to their blogs and ask them questions."*
> *(Keith, interview 1/1, lines 587-617/815)*

Furthermore, the interview discussions revealed that many celebrities (who were not on BodySpace) adopted MySpace and Facebook: *"Mostly the Facebook ones are for the really high up bodybuilders, they are just like fan sites. So you can become a fan. It's not really personal, it's like I'm a fan of Jay Cutler." (Paul, interview 2/2, lines 1352-1354/1536).* Jay Cutler, the Mr. Olympia at the time of this writing, had more than 10 000 fans on MySpace and more than 50 000 fans on Facebook. On these websites he posted new photos and videos, updates from competitions, and new merchandise. These two social network sites are beyond the scope of this study, but this observation highlights two limitations of BodySpace for celebrities. First, BodySpace fan pages and MySpace allow celebrities to reach large numbers of fans with a single post, whereas on BodySpace they would have to leave comments on a large number of profiles to attain similar visibility. Second, fan pages on Facebook are a way to separate public interactions from private interactions. Unlike on BodySpace, Facebook profiles can be set to private to block views from users who are not Facebook friends. BodySpace only offers public personal profiles, which has advantages like the information and inspiration people derive from viewing other people's profiles. However, the lack of privacy on BodySpace complicates participation particularly for celebrities, as indicated by Juliet:

"They are people too: Besides having a huge fan base, they are professional bodybuilders that have a network of business associates and friends. They don't want 10.000 friends to see their wall on Facebook. So a lot of them have two different levels of site: a fan one and their own. And their own is the one that they may block and not allow you to join." (Juliet, interview 1/1, lines 360-366/1181)

To summarise, celebrities rarely used BodySpace, and those who had profiles used them predominantly as a theatre to promote their achievements to fans. The group with the most varied participation were the beginners, who used BodySpace as a tool to learn, as a community to establish relationships with other bodybuilders, and to some extent to promote their early achievements. Mentors rarely used BodySpace as a tool—they rather used it as a community to develop their identity, and as a theatre to promote their achievements in competitions. Finally, aspiring celebrities used BodySpace to promote their commercial activities and to develop their reputation in order to become a celebrity in the future.

5.6 Discussion

Study 1 established three major themes (tool, community, and theatre) to describe participation in passion-centric social network sites. However, two outliers in the previous study raised the question of whether the practices within these three themes vary depending on whether someone is an amateur or a professional in the domain. Thus, the aim of this study was to follow up the differences between amateurs and professionals in their participation in passion-centric social network sites. The specific research question guiding this study was in what ways participation in passion-centric social network sites supports the development of a passion-related career from amateur to professional.

The findings showed that participation in passion-centric social network sites brings several benefits to passion-related careers of amateurs and professionals. The tool use facilitated the development of skills and knowledge. The community use helped people to establish and to maintain relationships with peers, in order to develop their passion-related identity and to open up business opportunities. Similarly, the theatre use helped people to promote their accomplishments, products, and services.

Overall, these findings supported the tool, community, and theatre themes established in study 1. Contrasting the use of passion-centric social network sites between amateurs and

professionals led to a more nuanced understanding of these themes. In investigating how passion-centric social network sites support the ambitions of individuals at different stages of their passion-related careers, this study generated three main insights:

1. *The distinctions between amateurs and professionals are not always clear-cut:* As indicated by the communities of practice perspective (Lave & Wenger, 1991; Wenger, 1998), distinctions between 'amateurs' and 'professionals' are too simplistic to describe the career trajectories related to passion. In my analysis I identified four different groups—beginners, mentors, aspiring celebrities, and celebrities—which describe typical stages in the development of passion.

2. *Participation in passion-centric social network sites varies between the four groups:* The comparison of beginners, mentors, aspiring celebrities, and celebrities showed that each group focussed on different aspects within the tool, community, and theatre themes. Furthermore, not all groups used passion-centric social network sites in all three ways—the use shifted from tool and community use towards theatre use as passion-related careers developed.

3. *The integration of passion-centric social network sites with other resources varies between these groups:* The findings confirmed that participation in passion-centric social network sites is closely entwined with offline activities, similar as on other social network sites (Beer, 2008b; boyd & Ellison, 2007). However, the observations also indicated that many activities shift from passion-centric social network sites to offline settings as passion-related career develop.

In the following subsections I will discuss these contributions in further detail. Each subsection addresses one of the sub-questions that guided this research. I will start by stating the sub-question before I elaborate on the contributions to discuss how they support, extend, and refine the assertions established in study 1 and related research. I will close the discussion with a critique of this study.

5.6.1 Passion-Related Career Stages beyond Amateurs and Professionals

The first sub-question of this study was asking what the critical stages in the development of passion are. The starting point for this study was a distinction between amateurs, who carry out their passion during their leisure time, and professionals, who make a living from

activities related to their passion. This simplistic distinction between amateurs and professional based on economical factors pervades much of the work in HCI. Previous work has either investigated the use of social network sites for amateurs (Lange, 2007a; A. D. Miller & Edwards, 2007) and leisure activities (Barkhuus & Tashiro, 2010; Ellison et al., 2007), or for collaboration amongst professionals in large organisations (DiMicco et al., 2008; Wu et al., 2010) and professional networking (Skeels & Grudin, 2009).

In light of this distinction between social network site use for amateurs and professionals, a first contribution of this study is to develop an understanding of online participation across these two groups. This contribution extends assertion 1 from study 1, addressing the gap in current understanding of passion-centric social network sites with one of the first studies on the collaboration within and between amateurs and professionals on the same social network site. Humphreys's study of amateurs and professionals on Ravelry focussed specifically on the challenge of protecting intellectual property online when users share information and ideas for free (S. Humphreys, 2008). This study found similar concerns, but the findings of this study are more far-reaching. As I will discuss in this section, amateurs and professionals differ in their aspirations and their sacrifices, and the differences do not occur on the boundary between leisure and professional work but rather at different stages in the intersection of these two areas. Furthermore, the next two sections will provide more details on the different benefits and limitations of social network sites for these groups.

This study illustrates that the categories of 'amateurs' and 'professionals' or 'leisure' and 'work' do not fully account for the variety of passion-related careers. As indicated by Stebbins (1992), serious leisure activities—activities that are "highly substantial, interesting, and fulfilling and where, in the typical case, participants find a career in acquiring and expressing a combination of its special skills, knowledge, and experience" (Stebbins, 1992, p. 3)—often blur the boundaries between work and leisure. Stebbins (2007) argues that amateurs in arts, entertainment, and sports often carry out their leisure with an intensity and commitment that borders to work. Unlike 'hobbyists' or 'dabblers', amateurs often take serious sacrifices into account to pursue their passion, as vividly illustrated in the strictly regimented lifestyles of the bodybuilders in this study. Furthermore, the personal trainers in this study challenged the concept of 'professionals'. They occupied jobs that were related to bodybuilding, yet most of them were not actually 'professional bodybuilders' who made a living from competitions.

Rather than categorising the participants as amateurs or professionals, I clustered them into four different groups depending on the status they had in the bodybuilding scene and on

BodySpace. This view was inspired by Lave and Wenger's (1991) concept of communities of practice, which are social groups defined by a shared enterprise like a shared interest or activity as bodybuilding, rather than a shared location. Lave and Wenger (1991) characterise community members by their skills and their identity and they distinguish between newcomers and old-timers. The skills and identities of newcomers that enter the community are less developed and thus they hold a peripheral status, but through their participation in the community they can develop their skills and identity further and gravitate towards more central positions. Old-timers, on the other hand, have rather central positions, yet inventions and new events force them to develop their skills and identities further to maintain their status. This view allows for different locations between the boundary and centres, and it also illustrates that not all careers end in central locations. As illustrated in figure 5-5, the four groups in this study reflected a variety of possible locations and possible trajectories within the community of practice with different needs for skill and identity development:
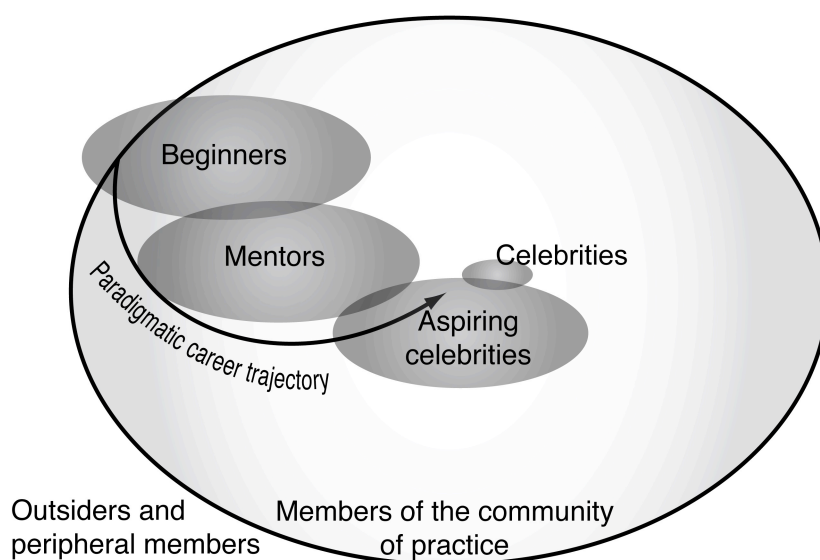
Figure 5-5: Locations and possible trajectories for beginners, mentors, aspiring celebrities, and celebrities in a community of practice (modified from Wenger, 1998, p. 167).

- *Beginners* in the context of bodybuilding became legitimate members of the community of practice through their first competition. As new members they occupied peripheral positions, and as indicated by Lave and Wenger (1991), the development of skills and identity were central to their careers. While participants like Paul may not remain permanent participants in the community, others like Juliet and Keith sought to develop their skills and identity further in order to become more immersed in the community of practice.

- *Mentors* were established members of the community of practice. This group consisted of pure amateurs that pursued professional careers in other areas (Nicole and Juliet), people with a job related to their passion who may aspire to become a celebrity (Wendy), and 'postprofessionals' (Stebbins, 1979) who used to have ambitions to become professional competitors and celebrities but who for some reason failed (Jeremy, Mark). Their main aim in participating online was to share their experience with others and to help them develop their careers, which in turn strengthened their own identity and status within the community.

- *Aspiring celebrities* had clear goals to develop towards more central positions in the community of practice, and unlike mentors, they put their own (commercial) interests first. The aspiring celebrities occupied a space in the proximity of celebrities, and the boundaries between these two groups were not always clear-cut. Like in most other serious leisure contexts (Stebbins, 1992), celebrities had to supplant their income with teaching and other jobs related to their passion. Thus, my main criteria for distinguishing between aspiring celebrities and celebrities was their main source of income. While some aspiring celebrities earned prize money, their main income still relied on supplementary jobs. To develop their careers further, the individuals in this group worked on their skills, but more importantly, on their identity, in order to become recognised as more central members.

- *Celebrities* had the most central statuses of all four groups. Only very few reached this status, where they made a living primarily from competing and sponsorships. The careers of celebrities served as role models for others in the domain, illustrating the possibilities within the community of practice. Although celebrities had the most advanced skills of all and were widely recognised in the community, they still needed to keep developing their skills and identity to stay on top.

Most participants had progressed from beginners to mentor, and some even to aspiring celebrity, in a seemingly linear manner. While such 'paradigmatic' career trajectories provide a role model for typical careers, which shape the learning of beginners and illustrate the set of possibilities within a community of practice (Wenger, 1998), it would also be possible to follow a different path. Beginners could progress directly to aspiring celebrities without becoming mentors. In some contexts it may even be possible to transfer one's fame from one community of practice to another one, allowing individuals to reach a celebrity status almost instantaneously.

The second main contribution is to support assertion 6 from study 1 and to further unpack the aspirations that shape participation in passion-centric social network sites. In interpreting the study data through the serious leisure (Stebbins, 2007) and communities of practice perspectives (Lave & Wenger, 1991; Wenger, 1998), this study illustrated a diversity of learning needs depending on the career status. The two main needs were the need to acquire the necessary skills to cope with the challenges inherent in passion, and the need to develop an identity as a member of the community of practice. The following two subsections will discuss how the these needs shape the use of passion-centric social network sites as a tool, community, and theatre, showing how passion-centric social network sites both supported and delimited the careers of the beginners, mentors, aspiring celebrities, and celebrities.

5.6.2 Benefits of Passion-Centric Social Network Sites for Different Career Stages

The second sub-question was concerned with the benefits of passion-centric social network sites for the development of passion-related careers. The findings supported assertion 7 from study 1, showing that passion-centric social network sites integrate a wide range of benefits that further the aspirations and careers related to passion. This study refined this assertion, showing that the benefits varied between the four different groups. As discussed in the previous subsection, the needs and aspirations of beginners, mentors, aspiring celebrities, and celebrities varied considerably, and thus they also focused on different aspects within the tool, community, and theatre themes to further their careers. Furthermore, not all groups used passion-centric social network sites for all three themes, rather the use shifted from tool and community use towards theatre use as people developed in their passion-related careers.

The group of beginners had the most varied benefits from tool and community uses. Like in other studies of communities of practice online, the participants in this group received various benefits from their tool use, such as information exchange (Torrey et al., 2009), sharing results of one's work (A. D. Miller & Edwards, 2007), assessment of the progress (Cook et al., 2009), and motivation (Fogg, 2002; Khaled et al., 2006). In fact, the beginners were the only group in this study that reported functional benefits from the various tool uses, partly because of the informational support they received from the group of mentors, and partly due to the limitations of tool uses for other groups (which I will discuss in the next subsection). These findings support assertion 2 from study 1, which stated that passion-

centric social network sites used as a tool help people improve their skills and performance. Study 2 further showed that these tool uses might be most beneficial for beginners.

As discussed in the previous section, the group of beginners also needed to establish an identity as a member of the community of practice. Beginners were often isolated from peers in their offline settings, and they reported that outsiders could not relate to their challenges. Bodybuilding may highlight the problem of social isolation, as illustrated by stereotypes like steroid use and the stigma carried by muscular bodies (Monaghan, 2001; Probert, 2007), but Stebbins (1979) argues that people feel marginalised by the general public in most serious leisure domains, even in popular activities like theatre and baseball. Due to their social isolation, the group of beginners used passion-centric social network sites extensively to establish relationships with other community members and to exchange support. This finding supports assertion 3, which highlighted the importance of passion-centric social network sites for connections with peers and support. The beginners also engaged in theatrical uses to demonstrate their skills and achievements to their peers, supporting assertion 4 that discusses the importance of passion-centric social network sites for theatrical uses. However, the participants emphasised that they used BodySpace primarily to develop skills and to connect with other community members.

The group of mentors used BodySpace mainly to develop their identity in order to maintain their position as insiders in the community of practice. Thus, they used the passion-centric social network site as a community to establish and to maintain relationships with their peers, and as a theatre to promote their achievements, which supported assertion 3 and 4. Although they were better connected with their peers, they still interacted predominantly with strangers online, which supported assertion 5. At the same time, some individuals in this group (Wendy and Juliet) integrated the social network site into their work to keep in touch with their clients in between face-to-face meetings. This integration of offline contacts into online interactions was similar to Facebook uses by students (Barkhuus & Tashiro, 2010; Lampe et al., 2008). However, the integration of offline contacts and online interactions in this study fulfilled a particular purpose for the passion of these users, i.e., it helped them to make progress in the pursuit of their goals. This finding challenged the second part of assertion 5, which suggested that offline ties receive no significant benefits from interacting on passion-centric social network sites. While most interactions in this study took place between strangers, the work-related collaborations of mentors and beginners highlighted that passion-centric social network sites also facilitate interactions between users with offline ties.

The group of aspiring celebrities predominantly appropriated the passion-centric social network site to promote their successes and their businesses. As highlighted in the previous section, this group aimed to develop their career trajectories further towards more central positions, and their main challenge was to develop a widely recognised identity. Thus, this group engaged with others online not only to keep in touch, but also to establish large networks within the community to advance in their careers. Similar to social network sites used in work settings (DiMicco et al., 2008; Steinfield et al., 2009), aspiring celebrities viewed the relationships with colleagues on the passion-centric social network site as 'bridging social capital' (Putnam, 2000)—loose relationships that provide them with beneficial information and new perspectives, and that help them to open up new avenues for their businesses. This observation supported assertion 3 about the importance of passion-centric social network sites for community uses, but it also shed new light on its purpose. Instead of sharing social support, this group underlined the importance of the community as an asset for their careers.

Furthermore, the aspiring celebrities were the main beneficiaries of using the passion-centric social network sites as a theatre. They used their profiles not only to present their achievements in competitions, but they also appropriated various tool features for commercial purposes to present their magazine articles and to advertise their sponsor's products. The profiles of aspiring celebrities were usually carefully crafted. Although they did not create a 'second self' (Turkle, 1995) online that had no resemblance to their offline identity, they used the control they had over their self-presentation on the social network site to create an idealised projection of their passion-related identity, similar to users of other social network sites like Facebook (Krasnova et al., 2009). This finding supported assertion 4 about the importance of theatrical uses for the development of an identity online, and it further showed that people appropriate passion-centric social network sites to get support for commercial activities related to their passion.

The celebrities appeared to receive very little benefit from their participation in passion-centric social network sites. The findings showed that they used the passion-centric social network site merely in a theatrical way to present their achievements and products, and to provide a link to their personal websites. This observation supported assertion 4, which stated that passion-centric social network sites are important as theatres for bodybuilders to present their achievements, similar the practices of celebrities in the music scene (Beer, 2008a; Suhr, 2009). However, this study also challenged assertion 4, because the lack of interaction with other users showed that passion-centric social network sites were not central to the career ambitions of celebrities.

A comparison of the four different groups with regards to their participation in passion-centric social network sites indicates a trend from tool and community towards theatre uses. In other words, the beginners in this study benefited from the contacts on passion-centric social network sites more than any other group for the development of their skills, whereas more experienced individuals appeared to benefit more from developing their passion-related identity online. These findings extend previous work on passion-centric social network sites that have looked at the differences between different groups in amateur and professional contexts in separation. Previous work on Flickr showed that amateurs are more likely to engage in community activities online than more casual photographers (A. D. Miller & Edwards, 2007), which supports the finding of this study that community aspects become more important as people develop further in their career in this study. However, unlike study 2, the Flickr study did not compare the findings between different groups of amateurs or even professionals. Thus, the shift towards theatre uses by aspiring celebrities constitutes a novel finding of this study that extends Miller and Edwards's work. Furthermore, the differences between aspiring celebrities and celebrities in study 2 divert from related work on social network sites in professional settings, which showed no differences between users from different organisational levels (Steinfield et al., 2009). Possibly, the fame of celebrities in this study as well as the lack of private profiles on BodySpace contributed to different online practices between aspiring celebrities and celebrities, whereas fame and fandom may not be an issue in office work settings described by Steinfield and colleagues (2009).

This trend from tool and community towards theatre uses also refines and extends models of online participation, like the behaviour chain of online participation (Fogg & Eckles, 2007) and the reader-to-leader framework (Preece & Shneiderman, 2009). Both models describe online participation as a linear process from the discovery of a website to lurking, and for some users, to committed participation and collaboration with other users of a website. While these models assume similar kinds of online participation between people at the stage of 'true commitment' (Fogg & Eckles, 2007) and 'collaboration' (Preece & Shneiderman, 2009), respectively, this study highlighted that committed users vary in their online participation depending on the stage of their passion. All participants in this study were loyal and committed users and collaborated with others to enhance their passion. However, as discussed above, their online activities varied depending on whether they were beginners, mentors, or aspiring celebrities. Thus, the combination of career stages and variations in the tool, community, and theatre themes refines the behaviour chain of online participation (Fogg & Eckles, 2007) and the reader-to-leader framework (Preece & Shneiderman, 2009) by adding another dimension to these linear models of online participation. This additional

dimension highlights the variation in online participation due to the stage of passion, as described in this section and the following section.

In summary, this subsection discussed the rich variety of benefits of passion-centric social network sites for the passion-related careers of their users. Although the benefits of passion-centric social network sites varied for the different groups, the findings confirmed assertion 8, showing that the participation in passion-centric social network sites was closely integrated with the offline practices of beginners, mentors, and aspiring celebrities. While passion-centric social network sites provided important benefits to most groups, the lack of participation of celebrities also indicates the limitations of these sites, as I will discuss next.

5.6.3 Limitations of Passion-Centric Social Network Sites for Different Career Stages

The final sub-question was concerned with the limitations of passion-centric social network sites for career advancement. The findings confirmed assertion 9 and 10 from study 1, and they highlighted further limitations of passion-centric social network sites that were specific the groups of mentors, aspiring celebrities, and celebrities.

Study 1 surfaced two major limitations of passion-centric social network sites, which were both confirmed in this study. This study confirmed assertion 9, which stated that participation in passion-centric social network sites increases the opportunities for unwanted comments, like messages with sexual undertones, in a similar way to what occurs on other friendship-driven social network sites (boyd, 2008b; Ybarra & Mitchell, 2008). Furthermore, it supported assertion 10, which pointed out that passion-centric social network sites limit opportunities for critical feedback, reflection, and discussion. This latter limitation may partly stem from the competitive and success-oriented culture within the bodybuilding community (Klein, 1993; Monaghan, 2001). However, the problem may also reflect a lack of mutual responsibility in the weak tie relationships on social network (Donath, 2007; Granovetter, 1973). This limitation may be further increased by shared values held by the users, which may lead to polarised views. In this respect, passion-centric social network site differ from friendship-driven social network sites like Facebook, which connect people with a wide variety of interests and viewpoints on controversial topics (boyd, 2008a; Ellison et al., 2009).

The rare tool uses in more experienced groups highlighted a further limitation of passion-centric social network sites. The findings of this study showed that mentors, aspiring celebrities, and celebrities rarely used the tool features to develop their skills. They occasionally asked strangers online, but they primarily relied on known and trusted sources to obtain information and feedback, such as magazines, but more importantly, their training partners, coaches, and colleagues in the gym. This observation appears to contradict related work by which Morris and colleagues (2010), which showed that more than half of their survey participants used social network sites like Facebook and Twitter to ask questions, and that the majority of them rated the answers they received as very valuable. Unlike Twitter and Facebook users, users of passion-centric social network sites rarely know their online networks in person, and therefore the mentors, aspiring celebrities, and celebrities in this study rather trusted their known offline peers. The lack of trust in the quality of the information on passion-centric social network sites was further increased by the lack of support by the most experienced and skilled participants. While the levels of participation of celebrities were generally low, the group of aspiring celebrities sometimes strategically withheld information. Similar to professionals on passion-centric social network sites for creative work (S. Humphreys, 2008), the aspiring celebrities felt that offering their expertise for free online could undermine their income which relied on selling their expertise. Overall, the findings of this study refined assertion 2, showing that the interactions with strangers on passion-centric social network sites provided a good starting point for beginners to develop skills and knowledge, whereas the quality of these online interactions did not match the quality of the interactions that mentors, aspiring celebrities, and celebrities had with trusted ties in other settings.

A further career-specific limitation was that participation in passion-centric social network sites only partially supported the commercial ambitions of aspiring celebrities. As discussed in the previous subsection, many aspiring celebrities viewed their connections with other users as 'bridging social capital' (Putnam, 2000) that they sought to leverage for their careers, similar to IBM employees on the social network site Beehive (DiMicco et al., 2008; Steinfield et al., 2009). The findings showed the passion-centric social network site was useful for aspiring celebrities to connect with other gym users, who they sought to recruit for their personal training business. While the top management of IBM is also on the social network site Beehive (DiMicco et al., 2008; Steinfield et al., 2009), those who occupy positions to offer jobs and sponsorships in the bodybuilding world—managers of supplement companies, magazine editors or photographers—were usually not bodybuilders themselves

and thus not on BodySpace. Thus, passion-centric social network sites may be limited in facilitating links to such groups in the periphery of communities of practice.

The lack of participation by celebrities highlighted limitations of passion-centric social network sites for their career needs. The widespread absence of celebrities in this study appears to contradict evidence from other social network sites, like MySpace and Facebook, which are home to many celebrities in the music scene (Beer, 2008a; Suhr, 2009). However, unlike passion-centric social network sites, the user base of MySpace and Facebook is not limited to a particular community of practice and thus provides a potentially much larger audience. Furthermore, Facebook and MySpace are designed to support communication between celebrities and a large number of fans. For instance, the wall on Facebook fan pages allows celebrities to broadcast news to a large number of fans, similar to traditional mass media (Emmett, 2008). Fans can comment on these news, which facilitates communication amongst them (Beer, 2008a), like on fan online communities (Baym, 2007). BodySpace lacks such special profiles for fan pages, and regular BodySpace profiles are better suited for communication between two individuals using comments and private messaging. The data showed that some celebrities made the effort to visit large numbers of fan profiles to post comments about new products. However, the time involved in this process and the limited audiences may explain why celebrities participate very rarely in passion-centric social network sites.

While the previous subsection showed that the practices of beginners, mentors, and aspiring celebrities were closely entwined with their offline lives, this subsection highlighted that the practices shifted increasingly from passion-centric social network sites to offline settings as people advanced in their careers. One explanation for this shift from online to offline collaboration may be that beginners in serious leisure activities tend to be more isolated from their peers than aspiring celebrities and celebrities (Stebbins 1979). Though the differences in social isolation were important, they only partially explained the shift from online to offline interactions. For example, Keith, a beginner, worked out in bodybuilding gyms coached by professional bodybuilders, yet he used the passion-centric social network site as a tool, community, and theatre. Conversely, Andy, an aspiring celebrity, worked in isolation from other bodybuilders, still he did not use the passion-centric social network site as a tool.

The alignment between online and offline identity provides a different angle on the shift from passion-centric social network sites to offline settings. The discussion in section 4.6.2 has highlighted that all participants used the passion-centric social network site to develop their identities online, which were generally an idealised reflection of their offline identity,

similar to Facebook users (Krasnova et al., 2009). Unlike on Facebook, LinkedIn, and Beehive, where personal and professional identities overlap (Skeels & Grudin, 2009; Wu et al., 2010), the findings showed that identities on passion-centric social network sites were usually limited to aspects related to their passion. The participants rarely revealed information about themselves that went beyond their bodybuilding activities. Thus, while all online identities reflected their offline bodybuilding identities, the alignment of the online identity with the offline identity varied between the groups. For beginners, the bodybuilding identity was only one of many important identities offline. While they had a strong need to establish an identity as a member of the community of practice (Lave & Wenger, 1991), they had very few places to develop this identity, which may explain the importance of passion-centric social network sites for their practices. On the other hand, the mentors, aspiring celebrities, and celebrities had a stronger overlap between their online identity and offline identity, because they had more places where they were identified as bodybuilders. Hence, online participation may have been less central to their identity development.

The discussion of identity indicated that passion-centric social network sites may play an important role as a place, independent from places like their gym. Particularly amateurs benefited from the passion-centric social network site as a place to establish relationships, socialise with peers, and develop their bodybuilder identity. Studies of virtual worlds (Ducheneaut, Moore, & Nickell, 2007; Steinkuehler & Williams, 2006) and social network sites (L. Humphreys, 2007) have used Oldenburg's notion of a 'third place' (Oldenburg, 1989) as a theoretical frame for place and social interactions online. Third places describe environments where people can gather to socialize informally beyond the workplace and home. The findings showed that the passion-centric social network site fulfilled some of Oldenburg's criteria for a third place—it provided a neutral ground with little obligation, easy access, and a group of regulars. However, the findings also highlighted issues where the passion-centric social network site did not fit the criteria for a third place. Oldenburg (1989) noted that an individual's rank and status in the home, workplace, or society are of no importance in third places. The findings showed that the passion-centric social network site indeed allowed beginners to get in touch with more experienced bodybuilders more easily than in the gym. However, the differences between the four groups in their online participation and the reluctance of aspiring celebrities to provide free advice online showed that rank and status mattered on the passion-centric social network site. Furthermore, while conversation was important on the passion-centric social network site, these conversations were rarely playful, like in Oldenburg's concept of third place (1989), but often rather utilitarian. The tool theme highlighted that beginners participate in passion-centric social

network sites to improve their training and dieting regimes. The community and theatre themes in the context of aspiring celebrities and celebrities showed that many of the interactions online were motivated by commercial interests, like selling services and products. These examples challenge the view that passion-centric social network sites constitute a separate place. They rather support assertion 8, showing that online activities are tightly integrated with the practices offline of all groups.

5.6.4 Critique of Study 2 and Open Issues

Similar to study 1, the recruitment of participants was a major challenge. My visit to California allowed me to recruit more experienced bodybuilders and personal trainers than in Australia during study 1, and I also observed professional bodybuilders like Jay Cutler during their workouts at Gold's Gym, but I could not recruit celebrities for my interviews. I sought to mitigate this limitation through observations of celebrities on BodySpace as well as through asking other bodybuilders about their observations. However, I could not discuss the findings about this group through with the celebrities themselves. While I carried out 'member checking' (Cho & Trent, 2006) in interviews with all the other groups in this study, the lack of celebrities involved in this study weakens the credibility of the findings.

Due to my limited stay in California, I could not meet all participants face-to-face for the interviews. As suggested by the literature on research methods (Sturges & Hanrahan, 2004), I found that telephone interviews based on my online observations yielded similarly rich results as face-to-face interviews. However, I could not video-record the participants in telephone interviews, which meant that I could not consistently use the film-elicitation technique (D. Harper, 2002) with all participants and missed opportunities for further reflection on their careers and their participation in BodySpace.

In total, I edited video clips for 10 of the 12 participants and invited them to discuss the videos in a follow-up interview. However I only managed to interview six of them for a second time, while four of the participants did not respond to my emails and private messages on BodySpace. Possibly, as self-employed personal trainers and photo models they were also affected by the global financial crisis which started to unfold during the study.[15]

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[15] The impact of the global financial crisis on the fitness industry was addressed in several articles on bodybuilding.com. For example, the article on http://www.bodybuilding.com/fun/create_bodyweight_workout.htm discusses how to make bodybuilding more cost-efficient to save money.

Although I could not interview all participants a second time, I could still observe their online activities and I had at least one participant from each the groups represented in this study to discuss my findings. In hindsight, I would offer a reward to simplify recruitment and to thank participants for their support.

In summary, despite the challenges of recruiting participants and keeping in touch with them over a distance, this study accounted for the outliers from study 1 and presented a nuanced understanding of participation in passion-centric social network sites. These findings were based on a combination of different methods and sources, and I discussed the findings with the participants in a member checking process to strengthen their credibility (Cho & Trent, 2006). As a result, the combined findings of study 1 and study 2 were consistent over time and applicable across different locations (Australia and USA) and different user groups. The tool, community, and theatre themes provided a stable and useful description of online participation for all study participants, and the groups of beginners, mentors, aspiring celebrities, and celebrities highlighted variations within these themes.

Study 1 and study 2 provided a nuanced understanding of online participation and passion-centric social network sites, yet the applicability of these findings to other passion-centric social network sites for different communities of practice was limited. As discussed by boyd and Ellison (2007), while technological features are stable across different social network sites, the practices and cultures surrounding them can vary considerably. Thus, I compared the findings from study 1 and study 2 with a different passion-centric social network site in study 3 in order to evaluate their applicability.

5.7 Summary of Contributions

The following assertions summarise the refined and extended findings, which describe different types of participation in passion-centric social network sites and their support for passion-related careers. Assertion 1-10 stem from study 1, and I refined them further during study 2 to account for the differences between the groups of beginners, mentors, aspiring celebrities, and celebrities:

1. This study addressed a gap in current understanding of social network sites that are designed to support people's passion (see chapter 2). The findings of study 1 revealed **three novel themes: tool, community, and theatre**. These themes describe how people participate in passion-centric social network sites.

The findings of study 2 strengthened and refined these themes. Previous work on social network sites that studied different kinds of amateurs (A. D. Miller & Edwards, 2007) and professionals (DiMicco et al., 2008) separately, or it addressed only one specific tension between these groups (S. Humphreys, 2008). Study 2 examined collaboration within and between these two groups to show the differences between their use of passion-centric social network sites as a tool, community, and theatre.

2. People use passion-centric social network sites as a **tool to improve their performance** in activities related to the passion. The various tool uses found in this research support findings from other studies about the importance of amateur online communities for sharing information (Blythe & Cairns, 2009; Harley & Fitzpatrick, 2009; Torrey et al., 2009), progress-monitoring (Cook et al., 2009), and comparisons (Fogg, 2002; Khaled et al., 2006).

   The findings of study 2 extended the above-mentioned studies by showing that beginners are the main beneficiaries of tool-related online participation to improve their performance. People at more advanced career stages rarely used passion-centric social network sites as tools. These groups appeared to trust in information from people they knew in person in other settings, rather than in information from strangers online. Furthermore, study 2 extended previous work on tensions between amateurs and professionals on passion-centric social network sites (S. Humphreys, 2008). Study 2 confirmed that sharing knowledge for free online can create tensions for professionals who rely on their knowledge to make an income, but it also showed that some professionals offer some information for free to attract clients for commercial work.

3. People use passion-centric social network sites as a **community to establish connections and exchange support with passionate peers.** As on friendship-driven social network sites (Donath, 2007; Ellison et al., 2007; Lampe et al., 2006), users of passion-centric social network sites benefit from the wide range of connections and the support exchanged online. In contrast to friendship-driven social network sites, connections on passion-centric social network sites are established based on shared activities and values, rather than on pre-existing offline contact.

   Study 2 showed differences between beginners, mentors, and aspiring celebrities in their community participation. While study 1 as well as related work (Golbeck, 2009; Harley & Fitzpatrick, 2009) suggested that passion-centric social network sites help to mitigate social isolation from peers, study 2 indicated that this generally just

the case for beginners. Although mentors and aspiring celebrities were better connected with their peers offline, they still participated in community activities: Mentors exchanged social support with peers like users of on friendship-driven social network sites (Donath, 2007; Joinson, 2008). Aspiring celebrities, on the other hand, saw their connections with peers as an asset for their professional careers, similar to professional workers on Beehive, a social network site within IBM (DiMicco et al., 2008; Steinfield et al., 2009). However, unlike Beehive, passion-centric social network sites did not provide connections to individuals who offer jobs, because individuals in these positions were usually not passionate themselves. Hence, passion-centric social network sites appear limited in supporting professional careers.

4. People use passion-centric social network sites as a **theatre to present a carefully crafted and sometimes idealised image of themselves online**, in a similar way to what occurs on friendship-driven social network sites (Aguiton et al., 2009; Krasnova et al., 2009; Pearson, 2009; Walther et al., 2008). However, unlike on friendship-driven social network sites, the shared passion provides a focus for what kinds of achievements get presented and find recognition online. The findings of study 1 and 2 showed that the feedback users receive is generally positive, which diverts from findings of negative and insulting feedback on YouTube (Lange, 2007b), possibly due to the more narrowly defined passion-centric group in this research and the visibility of all comments on the profile page.
Additionally, study 2 showed that theatre uses were less central for beginners than for experienced individuals. Mentors used passion-centric social network sites to showcase their achievements, and aspiring celebrities promoted their businesses online. Even some celebrities engaged in theatrical uses to promote their achievements, similar to celebrities in the music scene who participate in MySpace and Facebook (Beer, 2008a; Suhr, 2009). However, compared to Facebook, passion-centric social network sites offer only a limited audience and they lack means to broadcast news to a large number of fans (Emmett, 2008), which may limit participation of celebrities.

5. The findings of study 1 and study 2 indicated that **people predominantly interact with strangers** on passion-centric social network sites. However, study 2 provided also evidence for offline interactions between users. The mentors and aspiring celebrities in study 2 used the passion-centric social network site to keep in touch with people they knew in person, similar to users of friendship-driven social network

sites (Barkhuus & Tashiro, 2010; Ellison et al., 2007; Lampe et al., 2006). Unlike on friendship-driven social network sites, study 2 showed that people use passion-centric social network sites to supplement offline collaboration in order to achieve goals, both in their leisure activities and in their passion-related jobs.

6. Participation in passion-centric social network sites is motivated by the **combination of aspirations and sacrifices** involved in passion. Accordingly, passions are constant sources of tension with other areas of everyday life, which appears to challenge the dualistic concept of harmonious and obsessive passion (Vallerand, 2008, 2010). Unlike previous work in the area of passion-centric social network sites (Lange, 2007a; A. D. Miller & Edwards, 2007), study 1 illustrated how individuals participate in passion-centric social network sites to manage both aspirations and sacrifices.

    Study 2 further unpacked the aspirations and sacrifices of people at different stages of their passion-related careers. Based on previous work on communities of practice (Lave & Wenger, 1991), study 2 highlighted different needs for the development of skills and identity to develop their passion further, and their reflection in online participation.

7. Tool, community, and theatre illustrate the **wide range of benefits** that people receive on passion-centric social network sites. Usually, social network sites emphasise a particular form of support, like weak-tie relationships on friendship-driven social network sites (Donath, 2007; Joinson, 2008), emotional support on health-centred social network sites (Ashkanasy et al., 2009), or recognition on professional social network sites (DiMicco et al., 2008). Study 1 showed that passion-centric social network sites integrate all of these benefits and thereby support aspirations stemming from people's passions. Study 2 refined this assertion, showing that less experienced participants benefit more from informational and emotional support. More experienced people appear to benefit stronger from recognition online, while they receive informational and emotional support from their peers offline.

8. Users of passion-centric social network sites generally lack offline connections with other users, unlike users of friendship-driven social network sites (Beer, 2008b; boyd & Ellison, 2007) and professional social network sites (DiMicco et al., 2008). However, the tool, community, and theatre themes illustrate how online participation is **deeply entwined with activities and social processes offline**, despite the lack of

offline contact with other users. Study 2 confirmed the value of passion-centric social network sites for leisure activities, and it also illustrated how mentors and aspiring celebrities integrate passion-centric social network sites with commercial activities related to their passion.

9. Study 1 and study 2 showed that some users of passion-centric social network sites receive **unwanted comments,** like comments with a sexual undertone, in a similar way to what occurs on MySpace and Facebook (boyd, 2008b; Ybarra & Mitchell, 2008).

10. Users of passion-centric social network sites people share similar values, which **limits opportunities for critical feedback and discussion.** The lack of critical discussion may increase people's sacrifices and even nurture obsessive behaviours. This finding diverts from social network sites like Facebook, where people with differing interests and viewpoints engage in discussions of controversial topics like politics and environmental sustainability (boyd, 2008a; Ellison et al., 2009; Kushin & Kitchener, 2009).

    Study 2 provided further support for this assertion. The findings indicated that the competitive and success-oriented culture within the bodybuilding community (Klein, 1993; Monaghan, 2001), the lack of mutual responsibility between weak ties online (Donath, 2007), and the public setting may additionally contribute towards the lack of critical feedback and discussion.

The findings of study 2 led to two further assertions:

11. The comparison of the four groups in study 2 showed that the main focus of **online participation shifts from tool and community uses by beginners, to community and theatre uses by mentors, and theatrical uses for aspiring celebrities and celebrities**. This shift reflects different needs for the development of skills and identities, as indicated by Lave and Wenger (1991). This finding stands in opposition to previous work on social network sites in the context of large organisations, which found no evidence for different social network site uses between people at different career levels (Steinfield et al., 2009). However, this shift extends findings on the differences between amateurs and casual users of the passion-centric social network site Flickr (A. D. Miller & Edwards, 2007) by showing how the practices differ from professional users of passion-centric social network sites. More broadly, the shift from tool and community towards theatre refines linear models of online participation like the behaviour chain of online

participation (Fogg & Eckles, 2007) and the reader-to-leader framework (Preece & Shneiderman, 2009). These shifts add another dimension to these models to account for variations in online participation due to offline factors like the stage of passion.

12. The comparison of beginners, mentors, aspiring celebrities, and celebrities in study 2 indicated the passion-related **activities increasingly shift from passion-centric social network sites to offline settings as people advance in their careers**. This trend is partly due to the social isolation of beginners as compared to more experienced members, as indicated by Stebbins (1979). Furthermore, Lave and Wenger (1991) highlight the importance of developing an identity related to their passion. Beginners appear to rely more on passion-centric social network sites to develop their identity than more experienced participants, who have more places offline to develop their passion-related identity.

5.8 Conclusion

The aim of this chapter was to illustrate the relationship between passion-centric social network sites and different stages in passion-related careers. Study 1 indicated possible differences between amateurs and professionals with regards to their passion and their participation in passion-centric social network sites. This study explored these differences and showed how people develop their passion from a leisure activity to a professional occupation, which was illustrated through the career stages of beginners, mentors, aspiring celebrities, and celebrities.

These four stages represented different aspirations and sacrifices, and in turn they also highlighted differences in online participation. Based on the tool, community, and theatre themes from study 1, this study showed that beginners and mentors receive the most varied benefits from their online participation, whereas online participation of aspiring celebrities was generally limited to theatrical uses, and celebrities very rarely participated in these sites at all. The differences in the benefits and limitations of passion-centric social network sites between these groups highlighted two trends. First, the practices on passion-centric social network sites shifted from tool and community uses in the case of beginners, towards theatre uses in more experienced groups. A second trend showed that many practices that beginners carried out on passion-centric social network sites shifted to offline settings in more experienced groups.

This study led to a deeper understanding of online participation and showed how passion-centric social network sites support the development of passion. However, it was unclear whether these findings would also apply to other passion-centric social network sites. Previous work suggests that the practices and cultures vary considerably between social network sites despite their shared technical features (boyd & Ellison, 2007). The next chapter will describe the final study, which compared the findings from study 1 and 2 with a different social network site and passion in order to bring the thesis to closure.

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Chapter 6

Study 3: Application of Participation and Careers to Passion-Centric Social Network Sites where Offline Connections Exist

6.1 Introduction

The last two chapters developed a detailed understanding of online participation and its influence on the development of passion. In study 1 I drew from fieldwork in the context of bodybuilding and BodySpace to develop an understanding of different types of participation in passion-centric social network sites and their significance for offline activities related to this passion. Study 2 continued in the same context and extended the initial findings by showing how participation varies between people at different stages in their passion-related careers. However, the applicability of these findings was limited because both studies focussed on the same passion-centric social network site.

This chapter presents study 3, which compared the results from study 1 and 2 with a different passion-centric social network site. In study 3 I worked with a photography club in Melbourne to examine their participation in the passion-centric social network site Flickr. The comparison of Flickr and BodySpace showed which aspects of the understanding of social network sites and passion apply across different domains, which allowed me to bring the thesis to closure.

Section 6.2 describes the aims and the research questions guiding study 3. Section 6.3 provides details on the selection process for this study and the chosen context of analogue photography and Flickr, while section 6.4 presents details on the fieldwork. The findings of this study of participation in Flickr are described in section 6.5. Section 6.6 provides a discussion of the findings to answer the research questions and to show how study 3 supports and diverts from study 1 and 2. This section also includes a critique of the study, and section 6.7 summarises the contributions of study 3.

6.2 Objectives

The aim of study 3 was to compare the findings from study 1 and study 2 with the findings from a different setting in order to extend their applicability. The findings of study 1 established an understanding of participation in passion-centric social network site, as described by the tool, community, and theatre themes. The findings of study 2 showed how online participation supports the development of passion-related careers from beginners to celebrities. Study 3 was designed to extend the applicability of these findings through comparison with a different passion-centric social network site.

Study 3 focussed on a passion-centric social network site where users are connected online as well as offline. This choice was based on the literature review in chapter 2, which showed that passion-centric social network sites vary widely in the social relationships they support. boyd and Ellison (2007) claim that passion-centric social network sites primarily facilitate connections between 'strangers': people who share a passion for the same issue but who have no interactions outside the context of a passion-centric social network site. Study 1 widely supported this claim. However, study 2 provided evidence for people who had offline connections with other users of the passion-centric social network site. The number of offline connections in study 2 was smaller than the number of connections with strangers. Nevertheless, these offline connections contributed significantly to the development of passion (e.g., by offering opportunities for paid work related to the passion). Hence, the main research question and the related sub-questions for this study were focussed on exploring online and offline connections between users and their influence on the development of passion and online participation:

> **Research question 3:** Do the stages in the development of passion and the related types of online participation apply to passion-centric social network sites where individuals also have some form of offline connection?

- What kinds of connections exist between users of passion-centric social network sites online and offline?

- What is the influence of offline connections on the development of passion-related careers?

- What is the influence of offline connections on participation in passion-centric social network sites?

6.3 Case for Study 3: Analogue Photography Club on Flickr

As discussed in section 3.5.3, the research question for study 3 required a passion-centric social network site where users share some form of offline connection. I carried out a review of existing passion-centric social network sites after study 2 to identify sites that facilitate both offline and online connections between users. Appendix C.1 lists the passion-centric social network sites that I examined and provides further details on my observations of these sites. Based on my review I chose the photo-sharing website Flickr and a local photography club, which ensured that the study participants had offline and online connections with other users and were easily accessible in Melbourne.

During a phase of pre-study activities (described in section 6.4.1) I narrowed down the scope of this study to a photography club with a passion for traditional forms of film-based photography. Hence, I will refer to this club under the pseudonym of 'Analogue Photography Club' or APC. The following subsections provide more details on the passion-centric social network site Flickr and the activities of the APC.

6.3.1 Passion-Centric Social Network Site Flickr

Flickr[16] is a popular photo and video sharing website owned by Yahoo!. According to the official Flickr blog (Sheppard, 2010), Flickr users have uploaded more than five billion photos as of September 2010. Flickr offers free accounts, which limit the photo collection to a maximum of 200 photos, as well as an unlimited, paid option, called 'pro account'. Both types of accounts are used by a variety of different users, ranging from casual photographers who share their personal photographs with their friends, bloggers who use Flickr as photo

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[16] http://www.flickr.com/

repositories for their blogs, as well as serious amateur and professional photographers who use Flickr as an online photo gallery (A. D. Miller & Edwards, 2007; Van House, 2007).

Like on other social network sites (boyd & Ellison, 2007), Flickr users have a profile that contains a description about themselves, a list of contacts and memberships in Flickr groups, and testimonials by other users. While the profile lists background information, the central part of each user's self-presentation on Flickr is the so-called 'photostream'. As illustrated in figure 6-1, the photostream displays the photos in chronological order, and users can group related photos to sets. Furthermore, Flickr supports the tagging of photos, helping users to find and retrieve their own photos as well as to make their work more readily available to others (Ames & Naaman, 2007). While many photos are publicly visible to anyone on the Internet, photos can also be set to semi-private for contacts only, or to completely private to be visible for the owner only.
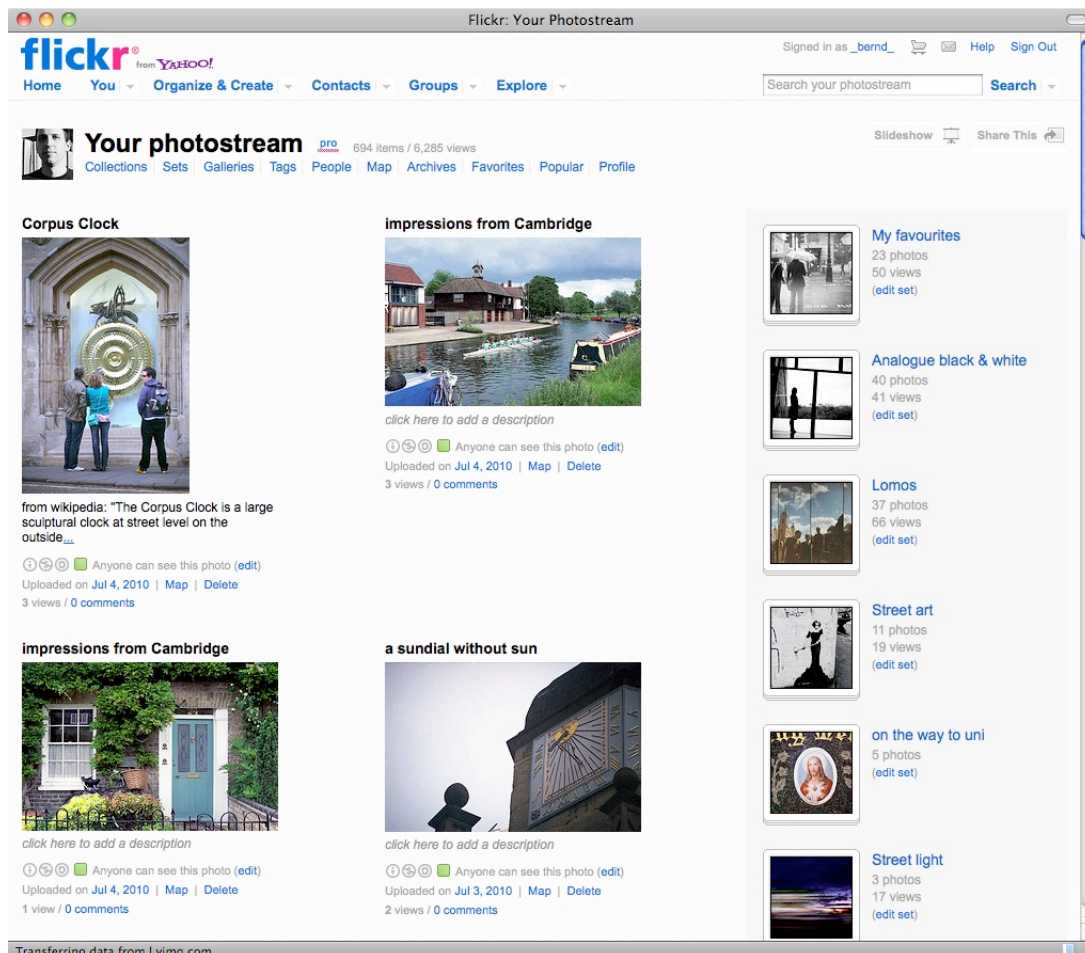
Figure 6-1: The Flickr photostream displays photos in chronological order (left side) and sets of photos (right side).

The photostream presents a portfolio of each Flickr user. Other Flickr users usually find other photos through their contact networks or searches for tags. They can leave comments on photos, tag them, and add them to their list of favourite photos. Users with pro accounts have access to statistics to monitor all these activities and the views they get on their photostream. A particular achievement in terms of visibility is if a photo gets listed on the so-called 'Explore' page. Designed to facilitate the discovery of popular photos, Explore lists the 500 most interesting photos of the entire Flickr system at any given time. Explore is based on a secret algorithm that takes into account the number of views and favourites.

In addition to the personal networks with other users, Flickr groups provide a meeting place for users with a shared interest. For instance, much of my pre-study work took place in the Melbourne Flickr group to familiarise myself with the local photographers. Figure 6-2 shows a screenshot of this group, which (like any other group) provides a pool for people to post their photos, and forums to discuss topics of interest.
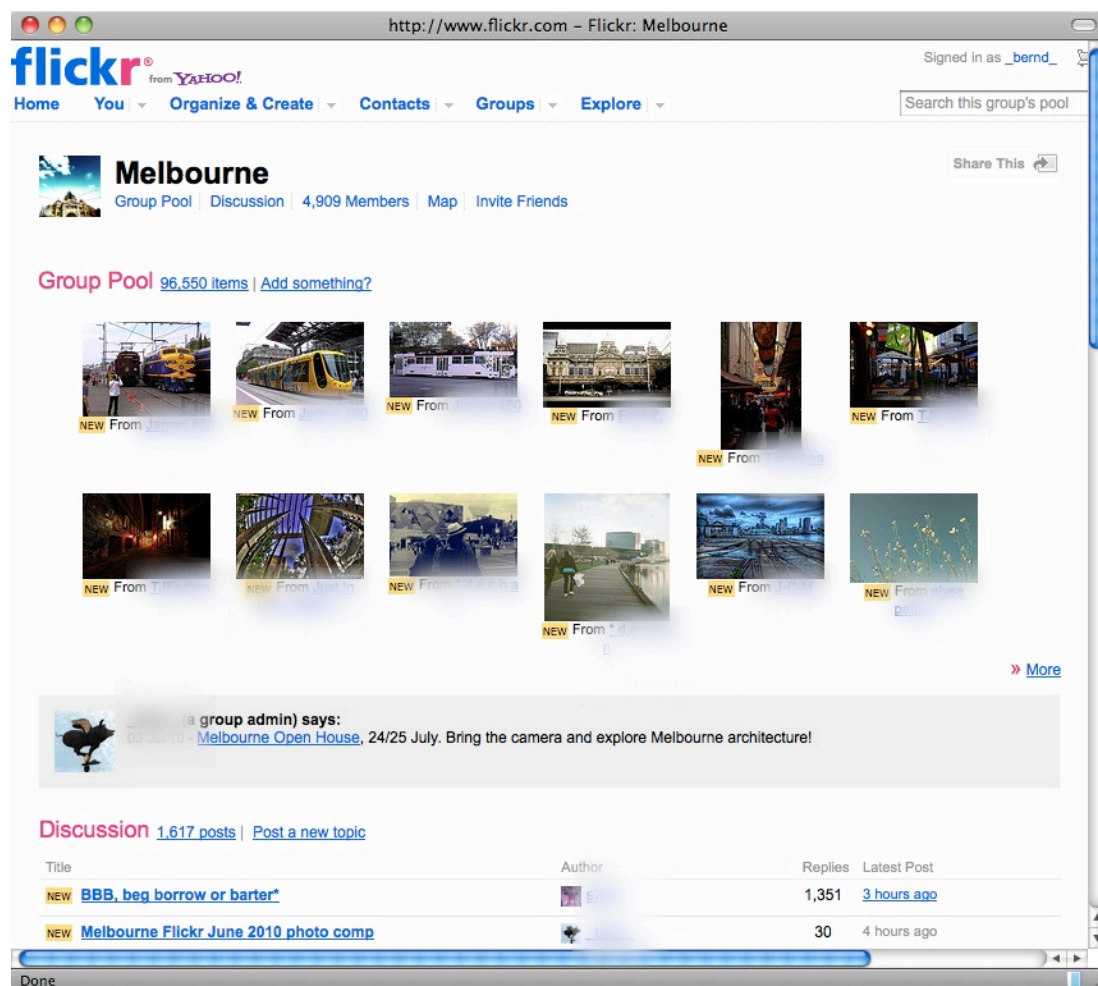
Figure 6-2: Flickr groups allow members with a common interest to congregate, share photos, and participate in online discussions.

6.3.2 Analogue Photography Club (APC)

The APC is both a Flickr group and a registered photography club in Melbourne. At the time of the study, the club had approximately 400 members on the Flickr group, 80 of them paying club members who have the right to exhibit their images in the yearly exhibition of the APC. APC members typically share a passion for vintage cameras, shooting on film, and 'photowork' (D. Kirk, Sellen, Rother, & Wood, 2006) like developing film in the darkroom. Despite the APC's interest in more traditional forms of photography, they were by no means luddites, as explained on the club website:

> *"Although we primarily exist to promote traditional photo technologies we embrace modern techniques. Our members are very technologically aware and seek to demonstrate how traditional technologies can work with digital photography and other modern photographic techniques to achieve a new art form, drawing the best from both old and new methods."*

The APC uses a wide range of social media with the APC Flickr group as its central component. The APC Flickr group provides a pool for members to post their photos and a discussion to discuss news, ask questions about all aspects of analogue photography, buy and sell equipment, and to organise club activities. The club organises photowalks,[17] photo competitions, bulk orders of film, and a yearly exhibition. Additionally, the club also has its own official website based on a blog to publish interviews with members, information about upcoming events, films and cameras. It integrates feeds from Twitter and Flickr, and it contains a wiki system to organise information about local resources in Melbourne.

APC members were generally amateur photographers, though a few members had part-time or full-time jobs related to photography. In defining themselves as amateurs or professional photographers, the APC members set themselves apart from casual photographers (sometimes also called 'snapshot culture', 'Kodak Culture' or 'domestic photography' (Chalfen, 1987; Cobley & Haeffner, 2009; Pink, 2007; Sontag, 1990; Wells, 2004)). Casual photography typically evolves around photos that document important family events like birthdays and holidays as well as the growing up of children (Sontag, 1990). These photos get shared with other family members and friends through prints, photo albums and slide shows, but also on the computer, on photo displays or via email (Lindley, Durrant, Kirk, &

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[17] Photowalks are meetings of photographers for the purpose of taking pictures during a walk. Most photowalks during this study were very informal, usually starting with a leisurely walk through a particular section of the city and ending at a pub.

Taylor, 2009) as well as on Flickr (A. D. Miller & Edwards, 2007). Pink (2007) points out that the categories of casual, amateur and professional photography (like all categories) are socially constructed, and individual photographers may not neatly fit into just one of these categories. The ease of taking photos, especially with digital cameras, makes distinctions between different kinds of photographers particularly complicated. Compared to other art forms like painting or playing a musical instrument, photography is relatively easy to learn and thus the results produced by the casual photographers, passionate amateurs, or professionals are often difficult to distinguish from one another (Sontag, 1990). The advent of digital cameras and digital image manipulation has given a wide range of people the means to produce technically and aesthetically advanced images, which blurred the margins between the different kinds of photographers further (Cobley & Haeffner, 2009) and disrupted their practices and values (Grinter, 2005).While I agree with Pink's criticism, I discuss the categories of casual, amateur and professional photography because they provide a starting point to describe different practices and values, and they help to link the findings of this study to related research on photography within HCI and beyond.

6.4 Study 3 Fieldwork

Similar to study 1 and 2, I used a multi-method fieldwork approach to examine the activities of APC members and their interactions with other photographers on Flickr and offline. The fieldwork comprised of interviews and photo elicitation with various members of the Analogue Photography Club (APC), as well as participant observation on Flickr and in various offline settings during photowalks and exhibitions.

Figure 6-3 gives an overview of the three overlapping phases of my fieldwork. I used the pre-study activities to get an overview of the study setting and to develop my photography skills further. Upon receiving ethics approval for my fieldwork, I started the data collection, and in parallel I also began to analyse the data. All parts of the study took place in Melbourne between May 2009 and the end of 2009. In the following subsections I will discuss all three phases of the research in more detail.

	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
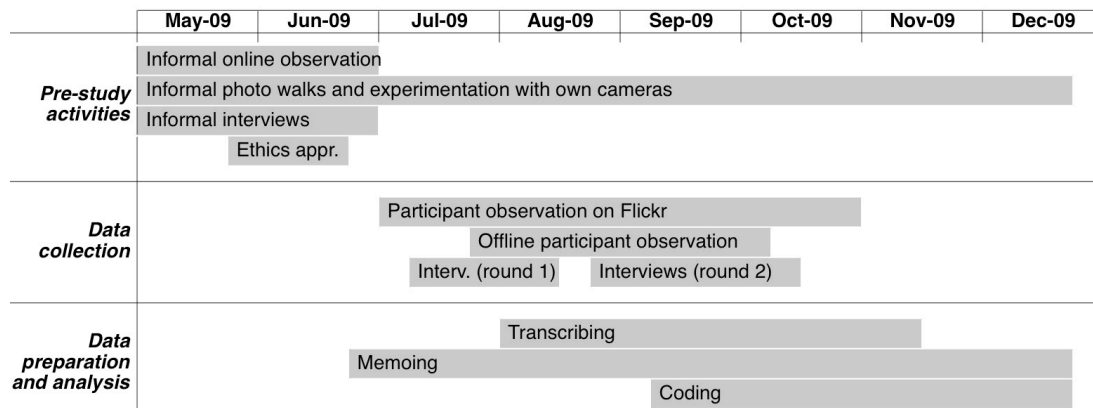
Figure 6-3: Timeline of pre-study activities, data collection, and analysis during study 3.

6.4.1 Pre-Study Activities

The pre-study activities included several orientation activities like observations on Flickr and informal interviews. Through these activities I developed an initial understanding of amateur photography and related Flickr uses, which guided my design of the main study and the preparation of the ethics proposal.

Orientation: Informal Online Observation, Photo Walks and Interviews

My aim during the orientation phase was to develop a better understanding of Flickr's role for serious amateur and professional photography in order to design the main study. I was a casual photographer and a Flickr user when I started this study. However, my general knowledge about photography, my equipment, and my skills were very different from the more serious photographers that I set out to study. I read photography books (Langford & Bilissi, 2008; Langford, Fox, & Smith, 2007) to learn about the technical aspects of photography, and I watched documentaries to learn more about its history (BBC, 2007) and famous photographers like André Kertész (BBC, 1983) and Steve McCurry (Cumbo, 2003). Throughout the entire duration of the fieldwork I used Flickr groups to search for technical information and to develop a sense for composition and light. When my focus fell on the APC, I obtained a film camera[18] to familiarise myself with the use of film, light metering, and manual focussing, in order to experience the same challenges as the participants did.

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[18] I obtained a second-hand Yashica FX-D, a 35mm film SLR camera produced in the early 1980's, and a Rolleicord Va, a medium-format, twin-lens reflex camera produced in 1957.

A particularly important source of information and inspiration during the orientation phase was the photography club at the University of Melbourne. Their photowalks, technical workshops and photo sharing sessions, where we critiqued each other's photos, helped me to develop my technical and aesthetic skills further. Moreover, I conducted informal interviews with several club members to learn about their photography-related activities and aspirations as well as their use of Flickr. These interviews helped me to develop the study instruments for the ethics approval.

Ethics Approval

Based on my understanding of photography and Flickr use from the orientation phase, I submitted an ethics application to the University of Melbourne. I included the various documents of this application in appendix C to make my initial study design and the way I communicated with potential participants transparent. The application consisted of a detailed description of the proposed research, a plain language description of the study for the participants (see appendix C.2), sample interview questions (see appendix C.3), and a screenshot of the study website that contains information for potential participants (see appendix C.4). The Humanities and Applied Sciences Human Ethics Sub-Committee at the University of Melbourne formally approved this study under the reference number 0932071 on 18 June 2009.

6.4.2 Data Collection and Preparation

I used a set of different methods to collect data about photography-related activities and interactions with peers. My approach comprised of participant observation on Flickr and in offline settings, as well as interviews with various members of the APC. The outcome of these investigations was a collection of online data, fieldnotes, and interview transcripts for the analysis phase of the fieldwork. Although the data collection and analysis are presented separately in this chapter, these two phases ran in parallel and shaped each other.

Online Participant Observation

The aim of the online participant observations was to collect data and to get a better understanding of the kinds of activities and conversations of the APC members on Flickr, and the meaning they have for their passion. In addition to my personal Flickr use, I used

Flickr from July to November 2009 to follow the updates in the photo pool and the discussion threads in the APC Flickr group as well as the related Melbourne Flickr group, which coordinated photowalks on a monthly basis in different parts of Melbourne.

Immersing myself into the APC and the Melbourne Flickr turned out to be a challenging process. When I started, I did not have the photos, the technical knowledge about photography, or the familiarity with the social fabric within the APC. Reading the group discussion threads on an ongoing basis and following the photos and comments in the group, I slowly developed a sense for the types of contents and social processes in the group. Later in the study I also had analogue photos that I could post to the APC group pool, as well as a basic technical background to start posting to the discussion threads.

As in the previous studies, I used the Firefox extension Scrapbook to collect online data relevant to the research questions of this study as well as the Flickr profiles of all participants (see appendix C.5 for an overview of the online data). The online data had several functions. I used the profile descriptions to prepare interview questions. The participants' photos and contact lists served as prompts for discussion during the interviews, and all online data served as primary data for the analysis.

Offline Participant Observation

Offline participant observation was another way to immerse myself into the APC activities in order to gain a better understanding of the relevance of online participation for club activities and the relationships between different club members. In the course of the fieldwork I went to photo walks and other meetings of the Melbourne group and APC members. I visited the APC group exhibition and two other exhibitions of participants. Furthermore, I went to a camera market organised by Australian Photographic Collector's Society, where the APC had a stall to sell cameras.

As on Flickr, participation in these offline events was challenging. During my first visit to an informal Melbourne Flickr group meeting I found myself immersed in a group of what one study participant described as 'gearheads'. This group of photographers used the meeting as an opportunity to compare, test and discuss their gear, in particular their vast collections of lenses. While I could not engage in the depths of their discussions, I could use my notes from this meeting in interviews to discuss the different kinds of interests within the context of photography. As I progressed with my studies I learned more about cameras and equipment, which made participation in subsequent meetings easier.

I wrote up my notes from all these events as fieldnotes. Appendix C.6 provides an excerpt from the fieldnotes from a visit to a camera market, which contains observations of the market, conversations with people at the market, and related discussions within the APC group on Flickr. The fieldnotes served as inputs for discussion in the interviews and as primary data for the analysis.

Interviews and Photo Elicitation

I conducted qualitative interviews (Weiss, 1995) with eight members of the Analogue Photography Club (APC) to discuss their relationships and interactions with club members, their participation in Flickr, as well as their photography careers. Interviewing each participant twice allowed me to get to know them in more depth and to ask them further questions that arose from the analysis of the first interview. Furthermore, I asked the participants to bring photos relating the various themes of passion to the second interview, where I used the photos to elicit discussion about participants' perspectives on passion and online participation (D. Harper, 2002; Pink, 2007).

The recruitment process was aimed at getting a diverse sample of APC members, including beginners and novel members as well as experienced and professional photographers. Having a diverse sample allowed me to develop an understanding of the significance of the passion-centric social network site Flickr at different stages in the development of this passion, and to compare the findings with the outcomes of study 2. Initially, I created a sample frame of 33 active participants in the APC Flickr group pool, and I contacted eight of them who were on the APC committee or administrators of the Flickr group, as well as younger photographers who described themselves as newcomers to the club. Six out of eight APC members replied to my message and offered their support. While one of them was overseas at the time of the study, the remaining five participated in the study, and they also suggested three more participants who also agreed to participate in this study. Table 6-1 lists the pseudonyms[19] and demographics of all eight participants as well as their self-reported time into 'serious' photography, which indicates the time since they had moved beyond casual photography and started to pay attention to the technical and aesthetic aspects of photography. All participants received a voucher valued USD 24.95 that extends their Flickr pro accounts for one year to acknowledge their contribution to this study.

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[19] I use pseudonyms for all participants to protect their privacy.

Table 6-1: Demographics of the participants in study 3.

Name	Sex	Age	Occupation	# Years into 'serious' photography	# Years on Flickr
Diane	F	40	Chef	4	4.6
Gary	M	18	Student	3	2.6
Henry	M	21	Student	3	3.0
Ken	M	25	Full-time professional photographer	5	2.3
Martin	M	34	Technician, part-time photographer	6	3.7
Robert	M	37	Film reviewer, part-time photographer	4	4.4
Sebastian	M	37	Restaurant owner (retired professional photographer)	16	1.7
Steve	M	39	Graphic designer	10	3.3

The first interview focussed on their use of Flickr, their photography, and their role in the APC. Prior to the first interview I read through each participant's profile information and personal websites, and I flicked through their photostreams to develop a sense for their interests and to collect prompts for discussion during the interview. The contact list on Flickr facilitated conversations about other APC members and Flickr users, whereas their photos elicited discussion about their interests and influences in photography. Furthermore, I asked the participants to bring one of their cameras to ask them how they take photos and how they acquired the camera. These questions generally led into a discussion of their analogue photography careers. Appendix C.3 lists the initial interview questions regarding Flickr, photography, and their role in the APC. These questions developed and changed throughout the study as my understanding of these issues developed. I carried out all interviews face-to-face in galleries, cafes or at the University of Melbourne, and they lasted between 50 and 120 minutes.[20] I created audio-recordings of all interviews and took a photo of each participant to help me remember them during the analysis.

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[20] I planned for an interview time between 45 and 60 minutes. Although I indicated to the participants that I had covered the topics that I prepared, many participants extended our conversations far beyond the intended timeframe and topics, which reflected their passion for photography and Flickr, and provided me with further insights into their practices.

The second interview focussed on the development of the participant's passion for photography, their aspirations for the future, and the influence of Flickr on their passion. The second interview took place between one and eight weeks after interview 1, depending on the availability of the participants. I asked the participants to bring photos that represent 'passion' as well as the related concepts of 'pursuit of a goal' and 'suffering' to the second interview, because they were the key concepts of passion at the time of study 3 based on the literature and the findings from the previous studies. The participants could take these images afresh or pick existing images from Flickr streams or newspapers, and we discussed these photos and their views on passion during the interviews. Appendix C.7 provides excerpts from interview transcripts and sample photos, which illustrate how I integrated the photos into the interviews to discuss the concept of passion. Furthermore, the second interview provided an opportunity to discuss questions and initial themes that emerged during the initial analysis of the first interview to discuss my interpretations with the participants to ensure they are credible to them (Cho & Trent, 2006; Corbin & Strauss, 2008). I conducted all interviews face-to-face. The interviews lasted between 50 and 120 minutes, and I fully transcribed all interviews to ensure that I would not omit any potentially relevant information.

Immediately after each interview I started preparing the data for the analysis. I created mind maps for each interview to summarise the main discussion points, and I wrote descriptions of each participant. Appendix C.8 contains all these descriptions, which summarise the participants' level of experience in photography, their use of Flickr and their engagement in the APC, as well as subjective impressions about the participants like their personality or their excitement for a particular aspect of photography. The mind maps and participant descriptions helped me to keep an overview of the study data during the data collection, and at the same time they provided a starting point for the data analysis, leading to new assertions and questions for the fieldwork.

6.4.3 Data Analysis

The aim of my analysis was to develop an understanding of how online participation augments the passion of the participants and their interactions with club members and other offline ties. The analysis was based on the tool, community, and theatre themes from study 1 to describe participation in passion-centric social network sites, as well as the development of passion-related careers from beginners to celebrities from study 2.

As suggested in the literature on ethnographic fieldwork (Hammersley & Atkinson, 2007), I analysed the data on an ongoing basis throughout the entire fieldwork period. I wrote analytic memos (Birks et al., 2008) to connect the data, assertions from previous studies, and theoretical concepts from the related literature, in order to develop my assertions further. Towards the end of the data collection phase I started to analyse the data through an iterative coding process (Hammersley & Atkinson, 2007). Having some distance from the field allowed me to review the data more critically to test if my initial assertions were supported by the data. The data for the coding process included:

- 611 snippets of online data from Flickr and other websites of the participants

- Fieldnotes from 7 visits to photo walks, exhibitions, and a camera market

- 16 interview transcripts

Memoing and Mind Mapping

In the early phases of the fieldwork I wrote memos and drew mind maps to structure the data, to capture new analytical ideas, and to develop the assertions from study 1 and study 2 further. While I used memos in Glaser's original view to document the development of ideas, concepts and relationships during the actual coding process (Glaser, 1978), I also used memos more broadly to document the development of ideas and assertions before the coding process, as recommended by Birks and colleagues (2008). I started memoing as soon as I began to collect data in order to develop the assertions from study 1 and study 2 further (see appendix C.9 for an excerpt from a memo on the passion of photography). Furthermore, I wrote memos to reflect on the conduct of the research. These memos included reflections on my feelings during the interviews and observations, as well as changes in my personal involvement in photography and Flickr. I wrote the these memos to remain aware of how my personal involvement may have influenced the research process (Coffey, 1999).

In addition to the memos, I created mind maps to structure the data and to keep an overview of the main themes during this study. Based on the memos and the mind maps generated after each interview, I created several large mind maps on butcher paper to summarise the main themes relevant to this study, like the connections with other Flickr users and club members, the career stages in photography, participation in Flickr, and APC activities that integrate Flickr and offline activities. Appendix C.10 gives an overview of all mind maps and shows a photo of a sample mind map on participation in Flickr based on the tool, community, and theatre themes from study 1.

Coding

The assertions and themes captured in the mind maps and memos provided a starting point for the analysis, but I coded the data in an iterative manner to test whether the collected data would support the initial assertions. As in the previous studies, the recommendations of a sensitised approach to grounded theory (Bowen, 2006; Corbin & Strauss, 2008; Neuman, 2006) based on open, axial, and selective coding guided my analysis and provided a general stance. However my approach towards coding also deviated from these recommendations. Neuman (2006, p. 461) suggests that the researcher "slowly reads fieldnotes, historical sources, or other data, looking for critical terms, central people, key events, or themes, which are then noted", whereas I started the development of codes already during the creation of these documents. Instead of mechanically transcribing the interviews, I viewed transcribing as a process to immerse myself into the data and to analyse the data. I typed the transcripts in Microsoft Excel, where I had one column for the transcribed text, and several further columns for initial codes, significant club members and Flickr users, photos we discussed, questions for the follow-up interview, and cross-references to other data. The initial codes came from study 1 and study 2, but numerous new codes also emerged from the data. Appendix C.7 provides excerpts from interview transcripts together with early codes to illustrate how I combined coding and transcribing. The combination of transcribing and coding took time, but it allowed me to capture the ideas and themes emerging during transcribing instantaneously and to connect them to the relevant data.

Transcribing and coding in Microsoft Excel provided a great degree of freedom for the first round of coding. However, for consecutive passes through the data I needed a more rigorous coding approach to better connect and compare the various codes and to test if my initial assertions from the memos and mind maps were indeed supported by the data. As in the previous studies, I used the software NVivo 7 to code, review the data, and to test and refine the assertions from the memos and mind maps.

My main aim in the first pass through the data in NVivo was to work with the codes from study 1, study 2, and the themes from the mind maps to test if they were supported by the data. In this way I could identify codes that were not relevant for this study as well as when I needed new codes to describe an event, activity or phenomenon in the data. Although various codes from study 1 and study 2 related to the study data, they did not necessarily capture the essence in the context of photography. For example, bodybuilders as well as photographers went through other people's profiles to compare their results with their own. While bodybuilders talked explicitly about 'comparisons', photographers rather talked about 'inspiration' that they drew from other people's work. Both activities describe similar

practices, yet the initial label did not capture the practices of photographers. Thus, coding in NVivo was both deductive—searching for data that supported existing codes—as well as inductive, in order to extend and refine the codes to reconcile outliers, differences between the study settings, and new trends in the data.

One of the main challenges in consecutive passes through the data was to bring differences between different kinds of participants to the surface. I used multiple strategies to address this challenge, like contrasting the data between the participants to extract data that highlighted differences in their online activities. Similar to study 2 (see appendix B.9), I used matrix queries in NVivo to contrast data between different groups, and I also created codes to collect instances of data that highlighted differences between groups.

Finally, the challenge during selective coding and writing this chapter was to give an accurate and holistic overview of the findings whilst remaining succinct. In order to check whether my account of the APC was accurate, I sent out copies of chapter drafts to the study participants. Their feedback helped me to adjust the findings and their presentation in the following section.

6.5 Findings

The aim of this study was to explore a passion-centric social network site where people also have offline connections with other users, in order to compare the findings regarding online participation and the development of passion with study 1 and 2. In the first subsection of the findings I will present the different kinds of connections between Flickr users to discuss whether my assumptions about offline connections, which formed the basis for my choice of Flickr and the Analogue Photography Club (APC), held true. The remaining two subsections will build on the findings from study 1 and 2 to discuss how offline connections with other Flickr users influenced the development of passion-related careers (from beginners to mentors and aspiring celebrities) and their participation in passion-centric social network sites (using the tool, community, and theatre themes).

6.5.1 Connections with Other Flickr Users and APC Members

All participants had connections to a wide range of Flickr users. The numbers of contacts listed on their profiles ranged from 43 to 970 connections (average 406.5 contacts), which

indicated that their Flickr connections were generally not refined to people they knew
offline. Generally, the participants stated that their list of Flickr contacts comprised of people
they knew in person as well as people whose photos they admired:

> *"All the people I got in there [as contacts on Flickr], they are all people whose*
> *photos I want to see. And there is a couple that are social contacts, they are sort*
> *of friends, but I try not to . . . They are people whose photos I'm not interested*
> *in, but they might be friends."* (Diane, interview 1/2, lines 1324-1339/1833)

The groups of people whose photos they admired and who they knew in person generally
overlapped due to the shared interest in analogue photography in the APC. Beyond that, all
participants also had connections with pure strangers—people they knew only online through
Flickr. In addition to the two categories of 'offline connections' and 'strangers', the
participants reported hybrid forms of offline connections and strangers. The participants had
connections with users with whom they had some form of offline connection although they
did not know them in person. Conversely, the participants reported about strangers who they
initially met on Flickr and later also in person.
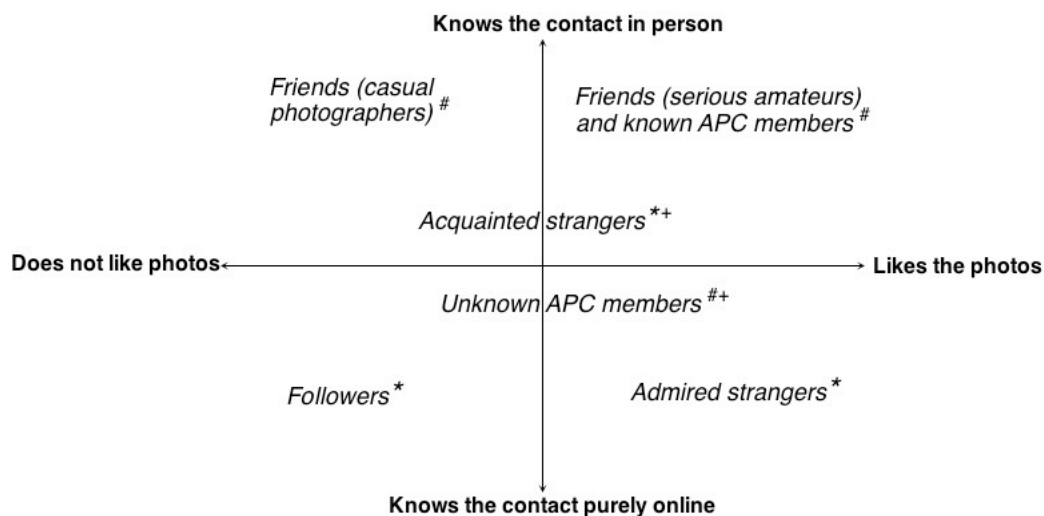
**Figure 6-4: The participants in study 3 established connections with other Flickr users who they
knew in person (#), strangers (*), as well as hybrids of these two forms of connections (+). The
participants further distinguished between users depending on whether they liked their photos
or not.**

Figure 6-4 illustrates the six main kinds of relationships identified in this study. The
illustration describes relationships according to the participants' accounts of how well they
knew the other person as well as how much they liked their photos. My analysis surfaced
two types of offline connections (friends and known APC members) and two kinds of

strangers (admired strangers and followers). Additionally, the data showed hybrid forms of offline connections (unknown APC members) and strangers (acquainted strangers). I will discuss these connections in further detail in the following subsections.

Offline Connections with Other Flickr Users

All participants had connections with Flickr users whom they also knew offline, both within the APC and beyond. These connections were sometimes casual photographers whose photos they did not find particularly interesting, but sometimes also serious amateurs who had a passion for photography as well. For instance, Steve and Sebastian shared a friendship based on photography that predated the APC and that also extended beyond its member base. Many of their online and offline interactions evolved around a group of friends outside the APC that meets informally every few weeks to chat about photography:

> *"We have other friends around us that are also interested in photography. It's good just to have a meet amongst friends. Someone has a new camera and brings it along. We talk about it and have a look. We talk about each other's photos. If someone has a book, we come along and share it. It's an informal get-together." (Steve, interview 1/2, lines 838-843/1016)*

While some users had personal relationships with other photographers and APC members that pre-dated their use of Flickr, many offline connections were either directly or indirectly established through Flickr. Some participants found the APC through Flickr and established connections with other APC members directly through conversations online, whereas other connections were established indirectly through Flickr, e.g., during events like photo walks or exhibitions that have been organised through Flickr. In fact, the APC itself was founded by a group of analogue photographers who met during photo walks of the associated Melbourne Flickr group:

> *"The Melbourne group meets up every month. And I've been going to these meetings probably since early 2006, late 2005 maybe. So through that I guess we met each other. And the people who were shooting film congregated together to talk about film stuff. So I guess we knew each other pretty well."*
> *(Martin, interview 1/2, lines 84-97/1889)*

In addition to friends and personal connections with club members, the analysis surfaced a third kind of offline connection with other Flickr users, which can be considered a hybrid of offline connections and strangers. Various participants talked about connections with other

APC members on Flickr who they had never met in person. Despite the lack of personal contact, the study participants regarded these APC members different from strangers (which I will discuss in the following subsection). Due to their shared affiliation with the APC and the likelihood of meeting them at a future APC event they viewed these contacts in the same vein as other APC members. The APC's president at the time of this study, Martin, sought to address this issue through a photo competition, which aimed at shooting portraits of other club members in order to introduce the growing number of club members to each other:

> *"The next thing we are physically doing right now is organising a competition within the group of portraiture. The idea will be that members will shoot other members of the APC, so it's kind of a community building exercise as well as a photography exercise. So hopefully, a few people who haven't met before might get together and do some mutual portraiture and that would be very interesting." (Martin, interview 1/2, lines 1076-1081/ 1889)*

Strangers on Flickr: Admired Strangers, Followers and Acquainted Strangers

In addition to offline connections with other APC members and friends, all participants had connections with strangers on Flickr. boyd and Ellison (2007) used the term 'stranger' to describe connections with other users of a social network site based on a shared interest rather than an existing offline network. While I use the term in the same sense, the findings surfaced three different kinds of strangers—admired strangers, followers and acquainted strangers.

> *"I met him on Flickr, I don't know, 2 or 3 years ago, and I like his photos very much. He has just got his own way of looking at things. And as I said, I have a thing for messy pictures at the moment, and this is a nice example for a messy photo, the cobwebs." (Diane, interview 2/2, lines 929-932/1781)*

The group of strangers contains other Flickr users whose photos one admires. As indicated by the above quote, these photos often provide inspiration for the development of their own style, in Diane's case to bring a more chaotic and messy look to her own pictures. In other cases, the photos provided inspiration for photographic techniques like double exposures or pinhole cameras. The participants found photos of admired strangers in group photo pools, favourites of their contacts, keyword-based searches, or the Explore mechanism, and they added admired strangers to their contact list to follow their updates.

> *"When do you decide to add someone as a contact on Flickr?*
>
> *I don't know, I have about so many that I haven't added yet.*
>
> People that have contacted you?
>
> *Yeah, people approach me, and it's gone to the point where it's reached 150 or*
> *200, and I'm like, I have to go there to each one and add and have a look.*
> *Because when I add [them], I have to look to see if I like the work.*
>
> So, if someone is not taking good photos, you wouldn't add him?
>
> *No, good means, something that appeals to me." (Sebastian interview 2/2, lines*
> *1772-1797)*

The above excerpt from my conversation with Sebastian illustrates the second kind of strangers: followers. Followers can be viewed as the opposite of admired strangers, they are strangers who found the participants' photos and added the participants to their contacts to follow them. The participants interpreted such invitations from followers partly as a genuine interest in their work, but partly also as a strategy to gain attention and views for the follower's own photos. (As I will discuss in more detail in section 6.5.3, many activities on Flickr were influenced by the desire to gain visibility). Flickr users do not have to reciprocate contact requests, but the participants generally felt a need, and partly a curiosity, to look at the other person's photostream. In some cases such requests lead to the discovery of admired strangers, which shows that followers and admired strangers overlap.

Some relationships with admired strangers or followers developed further into an acquaintance. By acquainted strangers I do not mean that people necessarily know the other user in person. Acquainted strangers are merely relationships between two online contacts that get to know each other through their photos or discussions in Flickr groups, and thereby develop a mutual understanding of each other's passion. Robert and Diane also met with acquainted strangers while they were travelling and they went on photowalks with them:

> *"Yeah, I would say I'm in such and such a city, like I met a guy who is on Flickr*
> *and lives in Nanjing in China. And when I was in Nanjing I met up with him."*
> *(Robert, interview 1/2, lines 1592-1593/1987)*

These encounters between acquainted strangers show that the label of 'stranger' does not exclude offline contact emanating from relationships that started online. Conversely, as discussed in the previous subsection, not all Flickr users who shared an offline connection through the APC had actually met in person.

6.5.2 Passion and Careers in the APC

This section illustrates the aspirations and sacrifices of photographers at different stages of their passion-related careers. Unlike the bodybuilders in study 1 and study 2, the participants in this study were neither socially isolated (as illustrated in the previous subsection) nor did they physically suffer for their passion. Nevertheless, the following discussion will illustrate that analogue photography contains similar combinations of aspirations and sacrifices. In some cases the participants admitted that their sacrifices also border to obsessions. Furthermore, aspirations and sacrifices vary between different kinds of passion within analogue photography as well as between people at different stages of their careers.

In the following subsections I will first discuss three different yet interrelated passions in the APC: a passion for the objects of image production, a passion for related technical processes, and a passion for taking images. Second, I will discuss the career trajectories from beginners to mentors and aspiring artists. I will use these findings about the various passions and career stages in section 6.5.3 to discuss how they shape participation in Flickr.

Different Kinds of Passion Within Analogue Photography

Like bodybuilding, analogue photography contains challenges that drive the activities of amateurs. In contrast to the passion of bodybuilding (which focussed primarily on competing), analogue photography allows people to delve into a number of different passions, all of them with their own combination of open-ended goals and sacrifices.

The *passion for the objects of image production* describes the attachment to cameras, lenses and other equipment. This passion combines the goal of collecting with the sacrifices of financing them. The participants used various arguments to justify their passion for cameras: high technical quality and longevity, a sense of tradition and attachment to the history of photography, the control they offer, and a sense of increased agency to view the world in a different way and to produce more interesting photos. However, some participants also acknowledged the sacrifices of this passion. For example, Sebastian sold large parts of his camera collection to fund the cost of 10 000 Australian dollars for a Leica rangefinder camera that he desired. Sebastian used this example of selling cameras as an argument to state that he can detach himself from cameras. However, he made a humorous statement about his friend Steve that acknowledges also his own attachment to cameras:

> *"He may say he doesn't [collect], but he has more cameras than me.*
> Is that a rivalry?*

> *No, he is a very close and dear friend of mine. But we always have this thing:*
> *Who is the bigger nutcase? Who has a true camera problem? I can tell you he*
> *does." (Sebastian, interview 1/2, lines 1729-1735/1800)*

The *passion for the technical processes of creating the image* refers to activities like developing film in the darkroom, printing, and scanning. These activities can be a fulfilling challenge, but some also viewed them as exhausting and time-consuming, and many digital photographers may regard them as obsolete. For example, half of the participants developed black-and-white film at home to save money, but they also enjoyed the technical challenge and took pride in the results, and they signal their achievements to other photographers on Flickr, as illustrated in figure 6-5.

Rolleicord V. Shanghai GP3 pan 100,
developed in Rodinal 1+100 @20C for 60
minutes (agitate first...

Figure 6-5: Screenshot from Ken's photostream. The image caption contains information about the camera and the development of the film in order to share information with other photographers and to signal achievements. (Image reproduced with permission from Ken)

While film development provided opportunities for experimentation and a sense of achievement, all processes related to digital images—scanning, post-processing, and archiving—were generally described as tedious work. For example, Steve scanned each photo in high resolution so that he can potentially get them printed in high quality, which resulted in time-intensive work and a large pile of unscanned negatives, which he characterised as 'painful':

> *"I scan them myself. One photo takes about 45 minutes, one frame. It takes a*
> *long time . . . Every year the pile just gets bigger and bigger. When I get a free*
> *moment I scan one frame, but it's just getting bigger . . . It takes a long time [to*
> *scan and edit one frame], from 15 minutes to maybe half an hour. There are*
> *lots of little spots here and there and I try to remove them. It's a lot of pain . . .*
> What's the backlog of photos?
> *I'd say about 4000, 5000 photos." (Steve, interview 1/2, lines 539-702/1016)*

Finally, the *passion for taking photos* is concerned with the hunt for interesting subjects, composing the image, and shooting. These activities are challenging and can be both rewarding but also frustrating. For example, the preferred genre for many APC members was street photography, which was convenient to access but left the photographers with little control over their subjects:

> *"It's easy taking stills. If I take a picture of a wall, for example, that's very easy.*
> *I can frame it. I can take all the time I want. But street shots, something exciting*
> *going on in the corner, you have to get it right the first time. It doesn't repeat.*
> *You can't go back and take another one, because people will have moved on*
> *and the moment is gone . . . That's what makes good street photography really*
> *hard. But it's really rewarding too. Because when it works it's really exciting, to*
> *me anyway." (Diane, interview 2/2, lines 646-668/1781)*

To summarise, the three different passions show the variety of aspirations and sacrifices in photography. The following discussion of career stages in the APC will highlight that beginners need to work on the challenges in all three areas to get to a basic level. Mentors tend to focus on the objects and technical processes, whereas aspiring artists are mainly concerned with subjects of their photos.

Passion-Centric Careers in the Analogue Photography Club

The three kinds of passion in analogue photography highlighted different challenges in the development of skills and knowledge related to this activity. The three career stages of 'beginners', 'mentors', and 'aspiring artists' in turn reflect different levels of experience in the aforementioned three challenges, and different statuses in the club. Figure 6-6 illustrates the statuses of individuals at different stages in their career based on their skills, connectedness, and reputation within the APC. The mentors and aspiring artists were usually old-timers in the APC with rather central statuses. These two groups mainly differed in their approach towards photography and in their aspirations, but not necessarily in their status in

the club. Beginners, on the other hand, were newcomers at the margins of the APC who yet had to develop skills, connections, and an identity in the club in order to move towards more central locations.
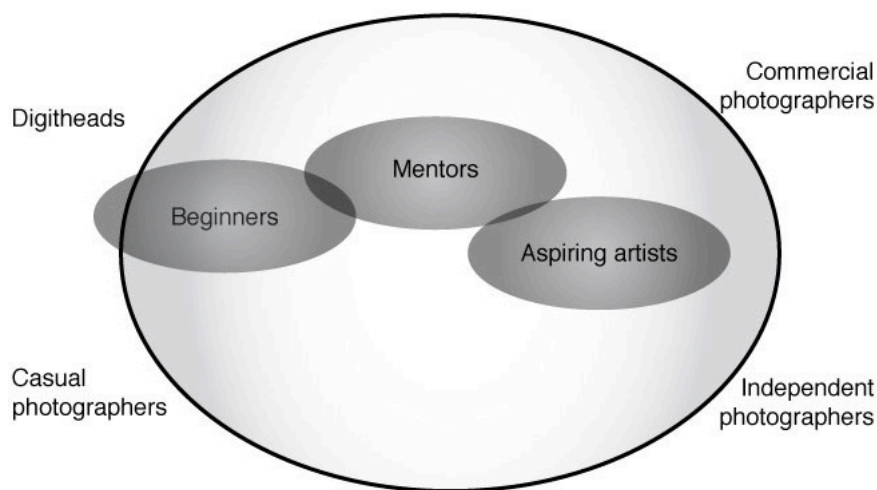
Figure 6-6: The APC members had different statuses within the club according to their skills and connectedness, and they were related to various peripheral groups of photographers.

Additionally, the above image shows significant groups of photographers in the periphery of the APC. Some of these peripheral groups provide starting points for the careers of analogue photographers in the APC, whereas other groups define aspired end points for their careers.

- *Casual photographers* generally use Flickr to share photos with their friends and family, but they do not pursue photography as a serious leisure activity. The participants associated casual photographers with photos of popular subjects, typically *"flowers, babies, and kittens, and sunsets." (Henry, interview 1/2, line 548/1618).* The APC members tried to avoid these subjects and rather focussed on street photography and portraiture.

- *Digitheads* are amateur photographers with a passion for digital technologies. They were similar to APC members with a passion for the objects of photography, but the APC members distinguished themselves from digitheads through their choice of analogue cameras and their interest in the artistic aspects of photography.

- *Commercial photographers* are professional photographers who get hired by clients to take photos, e.g., for weddings and advertisements. They present their work through Flickr although the Flickr community guidelines forbid commercial use: *"If we find you selling products, services, or yourself through your photostream, we will terminate your account" (online data #1, lines 76-77/111).* The APC members did

not aspire to the works of commercial photographers, because their images were constrained by the needs of the customers and therefore lacked originality.

- *Independent photographers* are professional photographers who (appear to) work free from constraints of clients. They use photography to express their own vision. This category includes established artists like William Eggleston as well as photojournalists like Henri Cartier-Bresson. All study participants named such people as important influences for the development of their careers. However, similar to the celebrities in study 2, established independent photographers had virtually no presence on Flickr.

The discussion of the diverse groups in the periphery of the APC hints how the participants wanted to see their work and the direction they wanted their career to develop towards. These distinctions are significant, because photography (unlike bodybuilding) lacks clear distinctions between different kinds of insiders and outsiders. In the case of bodybuilding the competitions provided a clear distinction between insiders and outsiders, and the different categories in competitions set amateurs and professionals apart. Thus, the brief discussion of different groups indicated important strategies that the APC members used to distinguish their work from casual photographers, digitheads, and commercial photographers, and to align their work with the work of independent photographers. In the following sections I will describe the different stages in the careers of APC members from beginners to aspiring artists.

Beginners: Learning Basic Skills

> *"It is challenging, which is part of the fun, because you don't want it to be too easy. You don't just want to turn up and do 'click', and that's done—that's easy. It would be great to just go click and to have an outstanding photo, but it would be a bit boring, wouldn't it?"* (Henry, interview 2/2, lines 1262-1275/1710)

The group of beginners entails photographers who recently switched to analogue photography and whose main challenges are to develop the basic technical skills to shoot with film and an identity within the APC. For instance, Henry had only recently acquired an analogue camera (a Nikon F3 SLR), which he proudly presented to me during the first interview, indicating his passion for the objects of photography. He had converted from a digithead to an analogue photographer, partly because of the aesthetics of film, and partly because it provided him with new technical challenges like controlling cameras manually and developing film, as indicated in the quote above.

> *"Do you know any of them?*
>
> *Not personally. I don't contribute to their discussions. I don't go to their social*
> *outings—it's just merely, I just read it. If I need to find something, I just search*
> *that group. I know most of the time they have things I need to know." (Henry,*
> *interview 1/2, lines 1578-1585/1618)*

Henry joined the APC on Flickr to find information on analogue photography, but he had not yet established an identity within the APC. As indicated in the quote above, Henry had not yet established offline connections with other APC members and he rarely posted photos to the group pool. Gary on the other hand was also relatively new to the APC, but he quickly developed an identity within the club, because he regularly went to offline meetings and he also posted photos and comments in the Flickr group. Other APC members also mentioned Gary in their interviews, thus indicating that Gary was already well known and in the transition from a beginner to a mentor.

Mentors: Sharing Skills and Knowledge

Mentors are old-timers in the club who are well known for their contributions to the APC, like the organisational work they do for the club, the kinds of photos they shoot, their camera collections, or their particular technical skills. Moreover, mentors generally want to share their particular passion with other club members and beyond, as indicated in Ken's statement about *the* expert on darkroom prints within the APC:

> *"I know three people in the APC that actually print optically at home. One of*
> *them, his name is Jeremy—because there is a whole different skill set to*
> *printing again. So he is very good at that, and he offered to print if anyone*
> *wanted an optical print, he would do it, you just have to buy him chemicals and*
> *paper, and that's it." (Ken, interview 1/2, lines 921-925/2677)*

Some mentors used their skills also as a way to generate an income, but they generally treated their professional photography different from their personal photography. Martin ran a photography business as a part-time job to make *"hobby money"* (Martin, interview 1/2, line 1501/1889) through shots of weddings and other social events. However, he did not intend to make photography a full-time job, because he felt that due to the customer expectations he would *"end up hating it"* (Martin, interview 1/2, line 1504/1889).

While all mentors exhibited their 'hobby stuff' in the APC group exhibition, their views on photography were different from the group of aspiring artists. Ken, Gary and Martin enjoyed

taking photos, but they also expressed a strong passion for the objects as well as the technical processes related to photography, as suggested by Ken (interview 1/2, lines 662-663/2677): *"I would say, probably about 50-50 or 60-40, so 60% taking the photo and 40% for developing"*. Beyond that, they did not refer to their work as artistic. Unlike the images of aspiring artists, the mentors felt that their own images lacked a common style or theme that would tie the individual images together to a coherent body of work: *"You can enjoy looking at it, but it hasn't got a message behind it"* (Martin, interview 1/2, line 849/1889).

Aspiring Artists: Developing a Unique Style

"I would say that there is an illustration of solitude, but it's balanced with a sense of hope . . . And I don't claim to, like I orchestrated this scene perfectly—it's instinct. I take the shot, and I look at the shot later, and it's like 'ah, that's what I was I thinking' . . . Like this guy, who is writing a journal, and he is visiting from my memory. He had no friends, he is just writing . . . I get this kind of feeling that he is by himself, and he is writing in his journal, yet beyond him there is this contrast of this light, and colour, and explosion. It's a deep contrast. There is a solitude here, but there is a massive sense of hope." (Robert, interview 1/2, lines 441-470/1987)

Figure 6-7: The photos of aspiring artists are characterised by recurring themes, like the combination of solitude and hope in Robert's images. (Image reproduced with permission from Robert)

The group of aspiring artists consists of old-timers in the APC that are well known by other club members and Flickr users for a particular style or a theme that spans across their photos. While mentors also often adhered to broad genres like street or landscape photography, the photos of aspiring artists were closer aligned to particular themes paired with a certain aesthetic. For instance, figure 6-7 illustrates Robert's preferred themes of solitude and hope, combined with recurring aesthetic elements like square format and the blurring of background lights in night scenes. Similarly, the other aspiring artists in this study, Diane, Steve, and Sebastian, had recurring themes and aesthetic elements in their photos that defined their artistic styles.

I use the term 'aspiring artists' rather than 'aspiring celebrities', because the photographers in this study had different career aspirations than the bodybuilders in study 2. None of the aspiring artists in this study viewed photography as a pathway into a professional career, neither as a commercial photographer nor as an independent photographer. They viewed that relying on photography for an income would turn their passion into a job and thereby obliterate the artistic approach: *"To me the value of the art is diminished if the intention is to make money out of it." (Robert, interview 1/2, lines 348-349/1987)*

In addition to their views on professional career ambitions, the aspiring artists in this study differed from the aspiring celebrities in study 2, at least in parts, on their aspirations for fame. While Sebastian and Robert invested large amounts of money to exhibit their work in galleries, Diane and Steve were only concerned with the images they produced—everything else, the technical processes, the passion for cameras, and the concern with fame and exhibiting work, was merely a distraction for them:

> *"At the end of the day, that's just one obstacle. If for you distinguishing yourself is not important, you know, you don't want to be some big celebrity. That's one thing less to worry about. If you don't want to publish a book, that's one thing less to worry about. You just worry about the photo." (Steve, interview 2/2, lines 503-509/685)*

To summarise, the groups of beginners, mentors, and aspiring artists represent different stages in the career trajectories of amateur photographers in the APC. Although the presentation in this section may suggest a linear progression from beginner to mentor to aspiring artist, this is not necessarily the case. Some beginners may stay in their peripheral role, and neither the status of a mentor nor of an aspiring artist suggests a more central position. Mentors and aspiring celebrities can equally be found in central and more peripheral positions, depending on their connectedness in the group and their skills. The main distinction between these two groups was that the mentors tended to focus on technical processes and collecting cameras, whereas the aspiring artists generally put more emphasis on taking images.

Having established the different kinds of passion in photography and the different stages in the development of passion-related careers, I will expand on the practices surrounding the passion-centric social network site Flickr in the following section. I will outline how the participants engaged in Flickr, showing how the career status as well as their offline connections with other Flickr users influenced their online participation.

6.5.3 Participation in Flickr

The findings regarding participation in Flickr supported the main themes established in previous studies. Again, beginners tended to benefit more from tool-related activities whereas mentors and aspiring artists expressed more interest in community and theatre activities. While the main themes remained stable, some of the sub-themes under the tool and community themes varied, partly due to the different challenges in the context of photography as well as due to the different kinds of connections with other Flickr users. Figure 6-8 summarises the various kinds of online participation in study 3, their limitations, and adjustments from previous studies.

| Main themes: | Tool | Community | Theatre |

Types of online participation:	Share information	Establish relationships	Self-promotion
	Gain Inspiration*	Socialise and maintain relationships*	Exchange appraisal
	Instrumental support*	Negotiate values*	

| Limitations of online participation: | Lack of critical feedback | Reaffirms separation from outsiders | Lack of presentations of failure |
| | | | Popularity contest* |

Figure 6-8: The affinity diagram shows the different types of online participation in study 3 together with their limitations. Changes from study 1 (see figure 4-3) are marked with an *.

Additionally, the findings indicated a strong interconnectedness between tool, community, and theatre themes as well as a strong integration between online and offline the activities. Due to the offline connections with other Flickr users, many online discussions referred to offline activities within the APC. While these APC activities often had a clear tool purpose like taking photos, they were equally community events where people got to know each other and socialised in an informal manner, which illustrates the strong interconnectedness between different themes.

In the following subsections I will discuss the different kinds of online participation and their limitations. I will focus particularly on the adjustments within the tool, community, and theatre themes, and I will highlight the links between the themes as well as their integration with offline activities.

Tool

The tool theme describes utilitarian ways of participating in passion-centric social network sites. Like the bodybuilders in study 1 and 2, the photographers used the passion-centric social network site to share information in order to develop their skills and knowledge further. In contrast to previous studies, however, progress monitoring and comparisons were less relevant. Instead, the photographers in this study used the passion-centric social network site to gain inspiration from their peers and to exchange instrumental support. They browsed through other people's images to develop a sense for what kinds of images they liked and what they did not like, and to gain new ideas. Such inspiration helps photographers to develop their style further, and in Ken's case it even led to the adoption of a new photographic genre:

> "A lot of the APC people shoot a lot of street photography, and I never did that before but I've started doing that since I've been talking to them and walking around with them and looking at their photos. So it's completely changed—I never did anything like that before and I started doing that, and it introduced a whole new level to my photography. In fact, the photo in the APC exhibition is a street photo, which I probably never would have taken if I hadn't joined the APC." (Ken, interview 1/2, lines 2300-2306/2677)

All participants mentioned the importance of inspiration from other photographers on Flickr, but the comments of the aspiring artists suggest that the value of Flickr for that purpose may wear off over time. For instance, Robert (interview 2/2, lines 2504-2065/2205) stated: "[Initially] you are gaining lots, but eventually things that you learn and gain from it

[Flickr] become less and less . . . I don't learn as much from it, but I still use it and comment on people's photos. But I less and less find inspiring photos on it." The aspiring artists found it difficult to find inspiring photos in the large collection of photos from casual photographers on Flickr, as indicated by Diane (interview 1/2, line 938-939/1833): *"It is a bit repetitive, it's always the same: You've got kittens, the puppies, the flowers, and sunsets, and that's boring to me."* Thus, the group of aspiring artists increasingly found inspiration from established photographers outside Flickr, like in books, galleries or on the Internet.

A further utilitarian purpose of Flickr was the exchange of instrumental support. Unlike the other tool uses—sharing knowledge and inspiration—this kind of participation was usually limited to exchanges within the APC. For example, the APC used Flickr to organise group orders from an online store in the USA, where the prices for film and other supplies were cheaper than in Australia. Other instances of support took place between two or more individuals within the APC, e.g., when club members borrowed equipment from one another or helped one another to print photos:

> *"I've borrowed gear off him a few times, which is handy. I actually got some gear of his in my car at the moment that I borrowed. Yeah, he has just started to do his own printing. I just went to check out his dark room the other day. So I'm gonna take advantage of that and make some prints at his house." (Ken, interview 2/2, lines 1128-1137/2624)*

Despite the various benefits of tool uses, the findings confirmed the lack of constructive critical feedback on passion-centric social network sites. Some photography clubs hold workshops where members critique each other's work, but the APC members did not exchange any constructive feedback between them, neither in offline workshops nor on Flickr. While Diane found a Flickr group outside the APC that was set up with the purpose to critique photos, other participants stated that leaving a publicly visible comment on a photo could result in a spiteful return rather than a constructive one, and thus they suggested that on Flickr *"no feedback is critical feedback" (Robert, interview 1/2, line 174/1987).*

In summary, all of the participants benefited from Flickr as a tool in order to share information, gain inspiration or to exchange instrumental support. While the lack of critical feedback affected all participants, the lack of inspiration was of particular concern to the group of aspiring artists, and they looked for inspiration in other avenues instead. The tool-related uses of Flickr had clear utilitarian purposes, e.g., to learn about developing film, but they were equally ways of getting to know other Flickr users, which I will discuss in further detail in the next subsection.

Community

> *"The Analogue Photography Club is the one that I'm really involved with . . .*
> *It's a social community and also an information network, where I've learned so*
> *much about shooting film, it's ridiculous. It has changed the way I shoot a lot,*
> *being involved in the community, so I really like Flickr for that." (Ken,*
> *interview 1/2, lines 2182-2188/2677)*

Various participants referred to the APC explicitly as their 'community'. As discussed in section 6.5.1, the community helped the participants to establish connections with others who share the same interest. Beyond that, it provided them with opportunities to maintain existing relationships with other Flickr users within and beyond the APC. In the case of strangers, the participants maintained contact by following the other person's photostreams, where they exchanged comments and favourites. While the relationships with strangers were focused on the shared passion, the conversations with other APC members went also beyond photography-related topics. For instance, the following statements emerged from a technical discussion about straightening film for scanning, and they illustrate the sense of humour within the APC as well as personal interests beyond photography:

> *"U: Being a photolab professional for over 10 years I have a special technique*
> *for flattening film that I would like to share with you all. I swear at it non-stop*
> *for about 10-15 minutes and then I give it the evil eye and it flattens right out.*
> *And then it scans itself. And makes me a cup of tea.*
> *V: I hate tea . . .*
> *W: I just leave my film under the pile of heavy art books overnight, and then put*
> *it straight on the glass of the scanner . . .*
> *X: Does it have to be art books? . . .*
> *Y: Its being crushed by the intellectual weight of Deleuze, and also the Twilight*
> *Saga in hardbacks for good measure."*
> *(online data #34, lines 53-175/180)*

The discussions on Flickr were usually tightly integrated with social activities offline. The APC organised a wide range of activities and events through Flickr, like the yearly APC group exhibition, photo competitions, and photowalks, and most of them involved socialising at a café or pub. My observations, during a meeting at a local pub, were that many conversations evolved around camera equipment and photos. However, Ken emphasised some members engaged in phatic communication, which means their aim was to maintain relationships rather than to exchange content:

"I was at that meet as well, and there was a group of people who just pulled out all their lenses and looked at that. That's fine and there is nothing wrong with that. But you will find that there were maybe only four people doing that. The rest of the people were sitting around doing other things. And there were a few people with their little disposable cameras. And they were talking more about taking photos and things like that. And also just about crap, nothing in particular." (Ken, interview 2/2, lines 1651-1661/2624)

In addition to establishing relationships and socialising, the participants used Flickr to negotiate the values underpinning their passion for analogue photography. Unlike the bodybuilders in study 1 and study 2, the APC members had different passions, and their passions and values differed from peripheral groups like casual photographers, digitheads, and commercial photographers. Accordingly, these values were not only reaffirmed online, but at times different values were openly discussed in discussion forums on Flickr to reaffirm the boundaries between the APC and other groups of photographers. For example, one of the APC members started a discussion in the Melbourne Flickr group, requesting to ban HDR[21] images from the Melbourne group pool (see figure 6-9 for a sample HDR image). This discussion projected the values of the APC to the Melbourne Flickr group, including their rejection of digital images. The study participants thought that HDR images look over-processed and artificial, which clashed with their ideals of a natural look in images, as indicated by Diane: *"There is a lot you can do wrong in post-processing. Usually it's too much contrast and the colours too saturated, so the whole thing looks a bit weird and fake and strange, and over the top and exaggerated, which I don't like."* (Diane, interview 2/2, lines 989-992/1781). Furthermore, HDR represents a popular trend amongst digitheads and casual photographers on Flickr, and the participants felt that casual photographers and digitheads often simply copied techniques like HDR in order to gain more visibility on Flickr. I will further elaborate on how the APC sought to present themselves and the desire to gain visibility and recognition in the next section on theatrical uses of Flickr.

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[21] HDR stands for 'high dynamic range', an image-processing technique to combine usually three images of the same scene—one over-exposed, one under-exposed and one regular exposure—into one image. HDR results in an image with high contrasts, where all areas, including shadows and highlights, are appropriately lit.

Figure 6-9: Sample HDR-processed image to illustrate the kinds of images that sparked controversy in online discussions between APC members and digital photographers. (Image reproduced with permission from the photographer[22])

Theatre

The theatre theme describes how individuals utilise passion-centric social network sites to promote their work and to provide appraisal for other people's work. As in previous studies, the participants presented themselves online through their images and their interactions with other users. However, the images on Flickr did not necessarily depict the users themselves, unlike the photos of bodybuilders in study 1 and study 2. Instead, the photos on Flickr represented the photographers' interest in a particular topic, or their passions for cameras and the related technical processes (as shown in figure 6-5 in section 6.5.2). The participants generally felt that their photostream on Flickr represented their identity as a photographer, like a portfolio represents the work of an artist or designer. Beyond that, some participants argued that their images did not only reflect their identity as a photographer but also more broadly their interests and desires in everyday life:

> *"For a lot of photographers, and maybe not all photographers, there is a piece of themselves in the photography, and I think other people when they look at your photos over the years, they'll think that they understand who you are as a person. Slowly, as they look at each photo, they are gaining some information*

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22 The image is available on www.flickr.com/photos/eddy999uk/4518378433/

about myself. And after time, they feel like they know me." (Robert, interview 1/2, lines 1637-1641/1987)

The participants in this study used Flickr for self-promotion, which means they expressed themselves in order to be seen as competent by others. All participants were very selective in the kinds of images they posted on Flickr. They generally omitted presentations of failures and only published their best images on Flickr: *"It's not about quantity any more. It's not like I put up every photo—I used to put up pretty much everything I scanned, but then I sort of did less and less of that. I've got lots of photos that aren't on Flickr." (Robert, interview 2/2, lines 1796-1799/2205).* Moreover, the participants selected only images that represented their passion, rather than any commercial work. While other photographers use Flickr as their professional portfolio, the part-time and full-time professionals in this study reserved Flickr for their personal photography:

> *"I just try and put the shots that I enjoy looking at most from each roll that I shoot up. And it's usually the hobby stuff that I do. I don't think about the pro stuff as being interesting for other people. That has a particular purpose—it's not an artistic statement." (Martin, interview 2/2, lines 370-373/2133)*

A further indicator for self-promotion was that the participants cared about the appraisal that they received on Flickr. The simplest form of receiving appraisal photos is to get views on photos, whereas more explicit forms of appraisal consist of receiving comments or being added to someone's favourites. Beyond that, three participants (Diane, Martin and Sebastian) reported that others found their images on Flickr and approached them to buy them for commercial uses (as stock images) or for private uses. Even Steve, who argued that he took photos primarily for himself and who was the only participant who expressed no interest in exhibiting his images in galleries, acknowledged the relevance of such feedback on Flickr, because *"it's interesting to see what the public thinks." (Steve, interview 2/2, line 154/685).* Robert confirmed this view and added, *"the most rewarding thing is kind of like how people see the image, and how it affected them." (Robert, interview 1/2, lines 1283-1284/1987).* Thus, some participants attributed a strong importance to the feedback they received on Flickr, and Robert even acknowledged that the desire to receive feedback could be 'addictive':

> *"To be honest, the process when I upload a Flickr, I go back and check if there are any comments. I don't even know why I do it. I could just check tomorrow, and the comments would still be there, they wouldn't disappear. But why do I check very soon after? Like I think, the thing with the Internet, and this goes*

back to the 90's, this is one of the main gift-reward kind of system. Before someone would get a letter in the mailbox from a friend, and like 'ah, cool!' then it was getting an email. Then it was 'winning' something on eBay, it's like getting a gift for yourself, and people talk about winning but they simply just bought them. And I think I see Flickr in a similar way in this kind of reward system . . . And I deliberately try not to look at it too much, but there is definitely, I can see why it's very enticing and addictive." (Robert, interview 1/2, lines 1736-1763/1987)

The participants argued that the design of two Flickr features shaped the interplay of self-promotion and appraisal considerably, which turned Flickr into a popularity contest for many users outside the APC. Pro users can access statistics about the views, comments and favourites they receive on Flickr on their photostream. Furthermore, the so-called 'Explore' feature lists the 500 most popular photos on the entire Flickr website at any given time, which is designed to help Flickr users discover new photos and photographers. The participants in this study were concerned that these features, in particular the Explore page, turned Flickr into a popularity contest, which adversely affected their interactions with strangers online. Through my online observations I found several discussions in other Flickr groups and on other websites about strategies for getting images into Explore, which provides further evidence for the popularity contest on Flickr. The study participants were aware of these strategies, and I listed their concerns together with the strategies in table 6-2.

To summarise, although all participants exhibited their photos in exhibitions, Flickr remained vital to them in order to promote their best images and to receive appraisal for them. The APC members monitored the feedback and appraisal they received on Flickr and acknowledged its importance. However they were critical of Flickr users who viewed appraisal through comments and Explore as their main aim rather than as an outcome of their self-expression on Flickr.

Table 6-2: Strategies for self-promotion on Flickr to get a photo into the top 500 list on Explore.

#	Strategy	Reference in the data
1	Shoot simple photos that stand out in thumbnail size.	*"Flickr is photography that you would normally navigate at the thumbnail level. It's not like a gallery where you see big pictures of everything, and you stand in front of it and look at it. It's just 10 seconds, thumbnail, and 10 seconds thumbnail. It's what's eye-catching that . . . grabs the attention." (Robert, interview 1/2, lines 100-105/1987)*
2	Focus on popular subjects like kittens or sunsets.	*"I don't really use Explore, because I find a lot of the stuff Explore gives you is kind of generic after a while . . . It's a lot of flowers, babies and kittens and sunsets." (Henry, interview 1/2, lines 543-548/1618)*
3	Copy popular photographic elements like bokeh or lens flare.	*"On Flickr there are popular elements and people will respond to them. Those will then go to Explore more . . . It could be bokeh, but even that seems to be giving away for incoming lens flair . . . So people can create photos from recipes of things they like in other photos and create a popular photo." (Robert, interview 2/2, lines 1283-1300/2205)*
4	Sex sells.	*"It's strange what gets attention on Flickr and what doesn't. You put a naked woman on Flickr you will get a lot of attention." (Sebastian 1, lines 718-719)*
5	Tag your images extensively.	*"He is very good at tagging. If you look at his photos—a lot of people have between 0 and 10 tags—he will have 45 or 50 tags. And that's one of the things that gets you a lot of hits." (Ken, interview 2/2, lines 859-861/2624)*
6	Comment on other people's photos and add them to your favourites.	*"It's also a popularity contest sort of feeling. The commenting, there is a currency of comments on Flickr, that seems to be how you interact with people on one level on Flickr, and that's pretty ugly, I think. I'll comment and fave your photo, and I expect you therefore to comment on my photo and fave mine. And therefore, I might get on to Explore. " (Martin, interview 1/2, lines 1670-1674/1889)*
7	Contact popular users who made it into Explore.	*"Talk to people that are popular. I think every user has kind of like a Flickr score . . . It's some algorithm that sums up your views, and your faves, and your stream, and it comes up with this number . . . If you have a photo that is faved by higher ranking Flickr users, it will boost your photo through Explore." (Robert, interview 2/2, lines 1310-1330/2205)*
8	Add your photo to groups to get comments.	*"There are groups that exist solely—you put a picture in a group and then you are obligated to, as part of the group rules, to comment on a certain number of other photos. So people would put it in 3 or 4 of these 'post 1, comment a 10' groups." (Gary, interview 2/2, lines 1547-1550/2070)*

6.6 Discussion

The aim of this study was to compare the findings on participation in passion-centric social network sites from study 1 and study 2 with a different study setting. Study 1 established various kinds of participation in passion-centric social network sites based on the tool, community, and theatre themes. Study 2 further elaborated on these themes, highlighting the differences in online participation between people at different stages of their passion-related careers. The findings of study 1 and study 2 confirmed boyd and Ellison's (2007) assertion that passion-centric social network sites support relationships between strangers, but they also indicated potentials for collaboration with users with pre-existing offline connections. Thus, the research question for this study was whether the findings from the previous studies would also apply to a setting where individuals collaborate with pre-existing offline ties.

The findings of study 3 generated the following insights, which support and extend the findings about passion and social network sites from study 1 and study 2:

1. *Passion-centric social network sites support a variety of connections, which indicate that simplistic distinctions between strangers and offline connections are insufficient:* One contribution of this study is to unwrap the different kinds of relationships on passion-centric social network sites. The findings showed different kinds of strangers and offline connections as well as hybrid forms of connections.

2. *Passion supports the development of careers despite the absence of professional career ambitions:* In contrast to the participants in study 2, the participants in this study did not view their passion as a stepping-stone into a professional career. While some participants had jobs related to their passion, they viewed that commercial work diminished their passion. Nevertheless, they drew inspiration from other professionals in the domain for their careers and thus pursued similar career trajectories as the participants in study 2.

3. *Offline connections facilitate a tight integration of online and offline activities as well as between the tool, community, and theatre activities:* The findings of this study supported and refined the tool, community, and theatre themes, which describe the various kinds of online participation, as established in study 1. Furthermore, this study supports some of the variations within these themes due to the passion-related career stage, as established in study 2. Beyond that, the interactions with offline contacts facilitated a tight integration of online and offline activities as well as a close integration between activities within the tool, community, and theatre themes.

I will discuss these contributions in further detail in the following subsections. In each subsection I will address how the findings address the related sub-question that guided this study, their contribution to the findings from study 1, study 2, and related work, and how they extend and refine the assertions established in the course of this thesis. Furthermore, I will show how this study contributes to prior work on photography in HCI. I will close the discussion by addressing the limitations of this study.

6.6.1 Different Kinds of Connections with Other Users

Previous work on social network sites distinguished between offline connections and strangers, arguing that passion-centric social network sites support primarily interactions between strangers (boyd & Ellison, 2007). The findings from study 1 and study 2 confirmed this assertion, but they also provided examples where connections with strangers developed into offline interactions. Thus, the first sub-questions of this study was concerned with what types of connections users develop on passion-centric social network sites.

The findings of this study support previous work on Flickr that has also found a mix of offline connections and strangers on Flickr (A. D. Miller & Edwards, 2007), but they also provide further nuances within the categories of offline contacts and strangers, as well as hybrid forms. Generally, the participants established contacts with people they knew offline or whose work they liked, which suggests that both dimensions—offline contact and shared passion—are important indicators for relationships on passion-centric social network sites.

In the case of offline contacts, the findings of this study indicate that people distinguish between different kinds of offline contacts based on their shared passion, i.e., whether they liked the images of the other person or not. This finding departs from discussions of offline relationships in the context of friendship-driven social network sites, where researchers rather relied on measures like tie strength (Granovetter, 1973) to unravel different kinds of mixed offline and online relationships (Donath & boyd, 2004; Gilbert et al., 2008). The differences between offline contacts on friendship-driven social network sites and on passion-centric social network sites may be related to different kinds of underlying relationships. Although they can all be labelled 'offline contacts', Facebook contacts may be better characterised through 'friendship', whereas contacts on Flickr may be closer to what Allan (1989) describes as 'mateship'. These two forms of relationships have much in common, and often mates develop into friends. However, mateships are limited to a specific social context, like a shared passion, whereas friendships are generally more multifaceted.

Furthermore, friendships are based on dyadic relationships whereas mates often meet in groups (Allan, 1989).

The distinction between different kinds of contacts based on their shared passion is also reflected in the various kinds of relationships with strangers online. One group of strangers consisted of users whose work they admired, whereas the other group (followers) comprised of people who expressed an interest in the works of the participants, but not the other way around. These findings support previous work on DeviantArt, a social network site for artists and art enthusiasts, which draws a similar distinction between outgoing or 'found relationships' with people whose work one admires, and incoming, 'sudden connections' who appreciate one's own work (Comber, 2009).

The two hybrid forms of connections reiterate that both offline contact and shared passion are important properties of online connections. Some strangers developed into 'acquainted strangers' based on ongoing conversations online, similar to the category of 'built connections' in Comber's work on DeviantArt (2009). As in study 2, some acquainted strangers met offline, yet the interactions on the passion-centric social network sites remained the defining aspect of their relationship, which made them more akin to strangers than to other club members. Conversely, the participants had online connections with other club members online that they had not actually met in person. Although they could be seen as strangers, the study participants described these unknown club members similar to other club members due to their shared club affiliation and the prospect of meeting them in person.

Overall, the various types of connections between passion-centric social network site users extend assertion 5, showing that people interact with a wide variety of people on passion-centric social network sites beyond strangers. Beyond that, the findings show that simplistic categories like 'strangers' or 'offline contacts' as suggested by boyd and Ellison (2007) are insufficiently varied. The combination of online and offline contacts and the overlap with other people's passion (or the lack thereof) resulted in a multitude of connections on social network sites. In the following subsections I will further discuss the influence of these connections on the development of passion-related careers and online participation.

6.6.2 Passion: Aspirations, Sacrifices, and Careers

The findings from the previous two studies showed how passion shapes participation in passion-centric social network sites. With regards to the concept of passion, study 1 showed that passion provides people with goals that also entail sacrifices. Study 2 built on these

findings, showing that these goals and sacrifices vary at different career stages (beginners, mentors, aspiring celebrities, and celebrities), which in turn contributes to different kinds of participation in passion-centric social network sites. Before I discuss participation, I will discuss the question to what extent the concept of passion and related career stages apply to another domain, and how they are influenced by offline connections with other users.

Overall, the findings of this study support the main concepts of passion developed in the previous studies. As established in study 1, photography provides people with a goal that entails also sacrifices. Furthermore, as discussed in study 2, passion provides individuals with career opportunities at the boundary between work and leisure.

Despite these similarities, the findings also highlighted various differences, which refined the understanding of passion and related careers. First, the photographers in this study viewed passion and commercial work as opposites that exclude one another, rather than as mutually inspiring opportunities. Some participants had jobs as photographers, but they viewed their passion-related photography and their professional work as separate activities. Due to the lack of passion for professional work and the associated fame, this study lacked the career stage of celebrities. Consequently, I also framed the most experienced amateurs as 'aspiring artists' rather than as 'aspiring celebrities'. While they did not aspire to become professionals themselves, they still drew inspiration from professional work, similar to the participants in study 2 and amateurs in other contexts (Stebbins, 2007). Instead of financial incentives or professional career prospects, their motivation was spurred by self-expression and validation from their peers, similar to amateurs in other settings offline (Stebbins, 2007) and online (Faulkner & Melican, 2007; Ito et al., 2009).

Second, analogue photography constituted of more than one passion. Unlike bodybuilders, the analogue photographers were passionate about different things like collecting cameras, developing and printing film, as well as taking pictures. All these challenges were open-ended and inexhaustible, which provided the basis for ongoing improvement and the development of careers, similar as in other amateur settings (Bogdan & Bowers, 2007).

Third, all of the different passion activities contained goals and sacrifices, but generally the participants did not perceive them as such. As expected, unlike the bodybuilders in the previous studies, the participants in this study did not feel isolated and neither did they experience any physical pain. However, similar to the bodybuilders, they viewed their activities as challenges, which motivated their work and constituted a barrier for others to take up this passion. These observations indicate that photography may constitute a more 'harmonious passion' (Vallerand et al., 2003) than bodybuilding. While photography had no

negative impact on other areas of everyday life, it still contained sufficient challenges to spur ongoing participation and a way to distinguish themselves from people who only casually engage in the same activity.

Finally, the boundaries between casual engagement, serious amateurs and professionals in photography were less well drawn in photography than in bodybuilding. Boundaries are important, because they define a community, give it an identity, and provide starting points for careers within that community (Wenger, 1998). As discussed in study 2, the first bodybuilding competition provided a clear starting point for their careers, and beyond that, bodybuilding competitions provided categories for different kinds of amateurs and professionals. The photographers lacked clear distinctions between different kinds of photographers, and Sontag (1990, pp. 131-132) even states: "the line between 'amateur' and 'professional,' 'primitive' and 'sophisticated' is not just harder to draw with photography than it is with painting—it has little meaning." The need to create such boundaries may account for the critical discussions online that were absent in the first two studies. This observation supports the findings of Grinter (2005) who investigated similar discussions of standards, boundaries between different groups, and values within photography clubs during the advent of digital photography.

In summary, the findings support assertion 6, providing further evidence for the combination of goals and sacrifices in passion and career opportunities, despite the absence of professional ambitions. Thus, one contribution of this study is to suggest a starting point for a better understanding of how passion develops, as called for by Vallerand (2008). Furthermore, the passion-related career trajectory from beginners to aspiring artists or aspiring celebrities provide a starting point to explain different motives for online participation, which extends the findings of other studies of passion-centric social network sites that focus primarily on the online practices and its outcomes (Lange, 2007a; A. D. Miller & Edwards, 2007). In the following section I will discuss how the challenges at the different stages of people's careers (beginners, mentors, aspiring artists) and the different kinds of connections with other users (strangers, offline contacts, and hybrid forms) shape participation in passion-centric social network sites.

6.6.3 Participation in Passion-Centric Social Network Sites

The findings of study 1 and study 2 suggested that people participate in passion-centric social network sites in three distinct yet interrelated ways, which I described as tool,

community, and theatre. Study 2 further highlighted differences in these kinds of online participation between individuals at different stages of their passion-related careers. Thus, in this part of the discussion I will discuss to which extent the findings from study 3 supported previous findings on online participation, and how the connections with offline contacts shaped participation.

Tool

Overall, the tool, community, and theatre themes provided a useful structure to describe the different kinds of participation of the amateur photographers in the passion-centric social network site Flickr. The findings supported assertion 2, confirming the importance of passion-centric social network sites as a tool to develop skills and to gain knowledge, as on other amateur online communities (Torrey et al., 2009). While progress monitoring and comparisons were less relevant for the photographers in this study, they used the passion-centric social network site to gain inspiration for their own work, which may be a result of the more artistic nature of this passion, similar to musicians (Cook et al., 2009) or video producers on YouTube (Ito et al., 2009).

The participants also exchanged instrumental support, i.e., practical support to develop images and material aid like borrowing equipment, which was only possible due to the offline connections with other users. The exchange of instrumental support extends assertion 7, demonstrating the wide variety of support that passion-centric social network sites facilitate.

The tool-related findings also reaffirmed assertion 10, which suggested that participation in passion-centric social network sites do not support critical, constructive feedback on the achievements of its users. This finding is surprising, because unlike in study 1 and study 2, the participants in this study were neither competitors nor strangers. Additionally, previous studies of amateur photographers suggested that club members critique each other's images in order to improve their work (Grinter, 2005). The findings of this study suggest that some participants viewed themselves as artists who felt that they were the best critics of their own work. Possibly, the publicly visible interactions with both offline contacts and strangers on Flickr further prevented critical feedback. The participants explained that all comments are publicly visible and that a negative comment would fall back negatively on a user in a narrowly defined passion-centric group as in the setting of this study. The rather polite culture on Flickr is further supported by the absence of flaming or haters in the data of this

study, which diverts from findings on other passion-centric social network sites that facilitate creative self-expression, like YouTube (Lange, 2007b).

Community

The findings of this study provided further support for the importance of passion-centric social network sites as communities. As stated in assertion 3, the participants used passion-centric social network sites to establish relationships with other users and to extend their networks, similar to the findings of studies of YouTube (Lange, 2007a). Furthermore, the findings of this study also demonstrated that passion-centric social network sites facilitate socialising and the maintenance of existing offline relationships between users with offline connections. These findings divert from earlier findings in this thesis, but they support findings from friendship-driven social network sites (Donath, 2007; Ellison et al., 2007; Lampe et al., 2006).

A further deviation from previous findings on community uses was the lack of social support in this study, as discussed in assertion 7. While passion-centric social network sites facilitate a wide variety of support between its users, social support was not relevant in this activity. Unlike bodybuilding, photography is generally neither physically demanding nor socially isolating.

Finally, the findings regarding the community uses also highlighted open, critical discussions of image aesthetics and their underlying values. This observation appears to contradict assertion 10, which states that such discussions are absent on passion-centric social network sites. This assertion was based on findings in a rather homogenous passion-centric social network site where most participants shared similar values, i.e., about steroid use in bodybuilding. Photography may appear less controversial than bodybuilding, yet Flickr hosts a wide variety of photographers with different and partially conflicting interests, standards, and values. These critical discussions on Flickr highlighted the different values and helped to define the scope and identity of the APC, similar to Facebook where people discuss issues like politics or environmental sustainability (boyd, 2008a; Ellison et al., 2009; Kushin & Kitchener, 2009; Park et al., 2009). In contrast to Facebook, critical discussions on Flickr help to define the values and therefore the boundaries of a passion-centric group.

Theatre

The findings of this study also supported assertion 4 regarding the various theatrical uses of passion-centric social network sites. As in study 1 and study 2, the participants promoted themselves online through their work. However, this kind of self-promotion is different from narcissism and popularity contests on Facebook (Buffardi & Campbell, 2008; Tong et al., 2008). On the contrary, the rejection of participating in the popularity contest on Flickr shows that the serious amateurs in this study saw their self-promotion as a way to express themselves through the outcomes of the passion, similar to serious bloggers (Faulkner & Melican, 2007) or media creators on YouTube or MySpace (Ito et al., 2009), Furthermore, their participation in passion-centric social network sites provided them with feedback and recognition, which supports the findings from study 1 and study 2 as well as findings from friendship-driven social network sites (Toma, 2010). Furthermore, as stated in assertion 4, the participants shared only their best work online and kept their failures private in order to put their best face forward.

This study provided mixed evidence regarding unwanted comments (assertion 9). On the one hand, none of the participants received comments with a sexual undertone. Though some participants presented nude portraits online, none of them reported inappropriate comments on them. One possible explanation for this difference between the two study settings is that unlike the bodybuilders in study 1 and study 2, the photographers did not present themselves in their photos and therefore they did not receive unwanted comments addressed to themselves. On the other hand, the participants in this study reported that the popularity contest on Flickr complicated their interactions with strangers. As listed in table 6-2, the participants received unsolicited contact requests and group invitations from people who sought to promote their creative work, similar to what occurs on YouTube (Benevenuto et al., 2009).

Differences Between Beginners, Mentors, and Aspiring Artists

The findings indicated differences between people at different stages in their passion-related careers, although these differences were not as strongly visible in the data as in study 2. The findings supported assertion 11, which indicates that participation shifts from tool to community to theatre uses as individuals mature from beginners to mentors and aspiring artists. All participants benefited from tool uses in order to learn and develop their passion further. However, the beginners in this study were often only readers (or 'lurkers') (Preece & Shneiderman, 2009) whereas mentors and aspiring artists were actively contributing to

discussions that were tool-related. That does not mean that the beginners did not use Flickr as a community or theatre. On the contrary, all of the participants were at the stage of 'true commitment' (Fogg & Eckles, 2007) on Flickr where they contributed actively and loyally to the online activities. However, their participation varied between different social contexts on Flickr. In some groups they were merely readers, whereas in others they were active contributors or even leaders (Preece & Shneiderman, 2009).

Additionally, the data provided support for assertion 12, suggesting that more experienced groups, i.e. the group of aspiring artists, increasingly shifted away from passion-centric social network sites towards other avenues to pursue their passion. All aspiring artists stressed the importance of looking for inspiration from other sources than Flickr in order to develop their work further. While all other participants also had role models outside Flickr, the aspiring artists were the only ones that explicitly articulated how other artists influenced their work. Furthermore, while all mentors displayed their work in the group exhibition, the aspiring artists were the only ones that got involved in other exhibitions as well, or even organised their own exhibitions. The aspiring artists were still highly active on Flickr, but these observations indicate that they also had other offline places where their work and their identity as a photographer were relevant, similar to the aspiring celebrities and celebrities in study 2.

The Influence of Offline Connections on Participation

Overall, the findings from study 3 supported most previous assertions about participation in passion-centric social network sites despite the offline contacts with other users. However, offline connections with other users appear to influence online participation in two ways.

First, offline connections contribute towards a strong integration of online and offline activities across all three themes, as suggested in assertion 8. The participants learned from one another offline and online (tool). They coordinated their meetings and events online (community). Finally, the photographers displayed their work in galleries and online and they exchanged appraisal for each other's work (theatre).

Furthermore, these interactions with offline contacts on and off the passion-centric social network site showed that all three kinds of participation were tightly integrated. For example, most club events had a functional (tool) purpose, like exchanging knowledge about darkroom techniques. At the same time, these events went beyond its functional purpose, allowing club members to develop relationships (community) and gain recognition for their achievements (theatre). This observation supports Lave and Wenger's concept of social

learning within a community of practice, where the development of skills, relationships, and an identity within the community are intertwined (Lave & Wenger, 1991). The passion-centric social network site Flickr supported the club members in all of these social learning activities.

6.6.4 Contribution to Related Work on Photography in HCI

The findings also contribute to previous work in HCI and CSCW on Flickr use and serious amateur photography. Previous studies suggest that promoting images on Flickr is a trade-off between quantity and quality (Nov et al., 2010). This study in the context of the APC confirms this finding, showing that APC members generally presented only their best images on Flickr. However, the findings of this study appear to contradict the related finding by Nov and colleagues (2009) that over time Flickr users decrease the number of images they post online. Only one participant (Robert) deliberately decreased the number of photos he posted on Flickr to publish only the best images. All other participants either aimed to have a steady flow of posted images on Flickr, or they posted images as soon as they had developed and scanned them.

Furthermore, this study supports, extends, and diverts from findings by van House (2007) regarding social uses of Flickr. The findings of this study support van House's findings, showing how people use Flickr to socialise and to maintain relationships. Beyond that, this study indicated additional social uses of Flickr across all three themes. The tool theme showed how people use Flickr to learn and to gain inspiration from other Flickr users. The community theme further elaborated on how individuals establish relationships with other users and how groups negotiate values and boundaries to other kinds of photographers. The theatre theme further showed the importance of appraisal in the social context of Flickr. Finally, the findings of this study rejected the observations of the study by van House (2007, p. 2721), which suggested that "Flickr relationships tend to be less connected with the offline world, focusing more on the images themselves". The findings of this study confirmed that some Flickr users have strong connections with other users based on offline activities.

The findings of this study extend the findings of three empirical studies of amateur photographers in the context of HCI. First, this study extends Grinter's (2005) study of amateur photography clubs during the transition from film-based to digital photography. In Grinter's (2005) study, digital photography provided new opportunities for photographers to create and to manipulate images. However, the ease of manipulating digital images

challenged how the club operated as a community, in particular, how it evaluated photography in competitions. More than five years after Grinter's study, digital photography is widespread, whereas analogue photography is only a niche activity. However, this study demonstrated why photographers still embrace analogue photography. The participants preferred the aesthetics of film-based images. They enjoyed the physical involvement in the development of an image and the wide variety of cameras available to them. Moreover, the focus on film-based photography and the rejection of digitally produced images provided the club members with a way to distinguish themselves from casual photographers and digitheads.

Second, the findings of this study extend the findings of Ljungblad's (2007) study of film-based amateur photographers by showing how contemporary approaches to film-based amateur photographers differ in their values. Ljungblad (2007) focused on so-called 'lomographers', who use low-cost reproductions of Russian vintage cameras. Lomographers value the particular visual aesthetics of film-based images, similar to the participants in this study. Both groups also identify strongly with the use of film as a medium. Despite these similarities, several participants in this study expressed strong objections towards lomography, in particular towards what Ljungblad describes as the "joy of the unpredictable" (Ljungblad, 2007, p. 361). While lomographers enjoy that their cameras provide them with unpredictable results, most APC members expressed that they needed to be in control of the camera and the production of an image. Particularly those participants with a passion for cameras and the technical processes viewed mastering the usage of a camera as an activity that they enjoyed. This skill set them apart from casual photographers, who (in the eyes of the participants) did not care about technical aspects.

Finally, this study supports but also diverts from the findings of Miller and Edwards's (2007) study of a new form of amateur photographers emerging on Flickr, which they called 'Snaprs'. The findings of this study support various observations about Snaprs on Flickr, like offline meetings and photowalks with other Flickr users, the presentation of artistic images to Flickr contacts and strangers online, and a passion for 'photowork' such as organising and editing images (D. Kirk et al., 2006). On first sight, the practices of Snaprs and the participants in this study appear very similar. However, they differ in the details of the aforementioned activities. Both groups enjoyed photowork, but the APC members expressed clear values regarding these activities, i.e., that all post-processing needs to be minimal in order to retain a natural look that remains truthful to the chosen camera and film. Similarly, both groups reported that they strive for artistic images. While the Snaprs suggested "sunsets" as an example for an artistic image (A. D. Miller & Edwards, 2007, p. 351), the

participants in this study explicitly rejected sunsets, as well as kittens and babies, because the APC regarded them as popular subjects amongst casual photographers. Especially the group of aspiring artists in this study had very strong and elaborate views on artistic images. They mentioned explicit influences from established artists and they saw their work defined by particular themes that they pursued in their images. Furthermore, the findings of this study extend the work of Miller and Edwards (2007) by showing how the popularity contest surrounding the Explore feature complicated the relationships with strangers on Flickr, especially with casual photographers and digitheads.

6.6.5 Critique of Study 3

This study investigated in depth the activities of a narrowly defined group of Flickr users. Hence, the main limitation of this study was that the findings may not equally apply to other Flickr users. The comparison of the findings between the three studies suggested that the tool, community, and theatre uses and the passion-related variations within these uses were similar across different passion-centric social network sites, and thus these findings may also apply to other Flickr users who pursue photography as a serious leisure activity (Stebbins, 2007). While the values of the photography club in this study were rather specific, a comparison of the findings with other studies of serious amateur photographers on Flickr, i.e., Miller and Edward's study of Snaprs (2007), shows similarities in the ways they use Flickr to exchange knowledge, coordinate group activities, and share photos.

While the available data and related work suggests similarities between passionate photographers, Flickr users that do not show a clear passion for photography may use Flickr in different ways. Miller and Edward's (2007) study of Flickr indicates that participation in social network sites varies considerably between serious amateurs and casual photographers. Study 3 further suggests that the development of advanced skills and knowledge, the development of an identity, as well as gaining recognition may not be as relevant for casual photographers as they are for serious amateurs. Accordingly, online participation of casual photographers may also vary considerably from the tool, community, and theatre themes presented in this study. However, as discussed in chapter 3, casual photographers are outside the scope of users with a clear passion examined in this thesis.

6.7 Summary of Contributions

The following assertions summarise the refined and extended findings of this study on participation in passion-centric social network sites. Assertion 1-10 stem from study 1, and assertion 11 and 12 stem from study 2. The findings of study 3 refined these assertions to document the influence of offline connections with other users on their participation in passion-centric social network site:

1. This research addressed a gap in current understanding of social network sites that are designed to support people's passion (see chapter 2). The findings of study 1 revealed **three novel themes: tool, community, and theatre**. These themes describe how people participate in passion-centric social network sites. The findings of study 2 and study 3 strengthened and refined these themes. Unlike previous studies that focussed on different kinds of amateurs (A. D. Miller & Edwards, 2007) or professionals (DiMicco et al., 2008), study 2 looked at the collaboration within and between these two groups to show the differences between their use of passion-centric social network sites as a tool, community, and theatre. Study 3 showed that these three types of participation and the career-related differences also apply to passion-centric social network sites where users are connected offline.

2. People use passion-centric social network sites as a **tool to improve their performance** in activities related to their passion. The various tool uses found in this research support findings from other studies about the importance of amateur online communities for sharing information (Torrey et al., 2009), comparing one's progress with others (Fogg, 2002; Khaled et al., 2006), and inspiration (Cook et al., 2009). The findings of study 2 and study 3 extended the above-mentioned studies, showing that beginners are the main beneficiaries of tool uses. Users at more advanced career stages still benefit from using passion-centric social network sites as tools, unless the free information exchange undermines their ability to generate income from their work (S. Humphreys, 2008). However, study 2 and study 3 showed that users at more advanced stages of their passion usually gain support from a much wider variety of resources online and offline than beginners.

3. People use passion-centric social network sites as a **community to establish connections and exchange support with passionate peers.** Passion-centric social network sites help individuals to extend their networks with strangers based on shared activities and values, as on YouTube (Lange, 2007a). Most participants interact with others online to exchange support and develop an identity within the

community, similar to users of friendship-driven social network sites (Donath, 2007; Joinson, 2008).

Extending study 1 and related work (Golbeck, 2009; Harley & Fitzpatrick, 2009), study 2 showed that beginners particularly benefit from establishing relationships help to mitigate social isolation from peers. Study 3 showed that passion-centric social network sites are important for beginners to establish relationships even when social isolation is not a concern.

In addition, study 3 (and in parts study 2) showed that individuals with offline connections to peers also use passion-centric social network sites to keep in touch with them, similar to users of friendship-driven social network sites (Donath, 2007; Ellison et al., 2007; Lampe et al., 2006).

While many individuals view their passion and participation in passion-centric social network sites purely as leisure, study 2 showed that people with passion-related jobs view their connections with peers as an asset for their professional careers, similar to users of social network sites within large companies (DiMicco et al., 2008; Steinfield et al., 2009). This finding was not supported by study 3, because the participants were not passionate about related jobs. Hence, they did not use passion-centric social network sites for their professional work.

4. People use passion-centric social network sites as a **theatre to present a carefully crafted image of themselves online**, in a similar way to what occurs on friendship-driven social network sites (Aguiton et al., 2009; Pearson, 2009; Walther et al., 2008). Users of passion-centric social network sites are selective in their self-presentation and generally put only positive aspects about themselves and their best photos online, similar to Facebook users (Krasnova et al., 2009). However, this kind of self-presentation is different from narcissistic self-promotion and popularity contests on friendship-driven social network sites (Buffardi & Campbell, 2008; Tong et al., 2008), and more akin to self-expression through one's passion, similar to bloggers (Faulkner & Melican, 2007) or media creators on YouTube and MySpace (Ito et al., 2009). All three studies confirmed the importance of feedback and recognition on passion-centric social network sites, similar to findings from friendship-driven social network sites (Toma, 2010). None of the three studies in this thesis provided evidence for negative and insulting feedback, which diverts from studies of YouTube (Lange, 2007b). Unlike YouTube, all three studies focussed on narrowly defined passion-centric groups and all comments were publicly visible, which may have discouraged negative messages.

The findings of study 2 and study 3 further suggested that the use of passion-centric social network sites as a theatre is less central for beginners than for experienced individuals, who use these sites to showcase their achievements. Study 2 further indicated that aspiring celebrities and even some celebrities use passion-centric social network sites to promote their businesses, similar to celebrities in the music scene who participate in MySpace and Facebook (Beer, 2008a; Suhr, 2009). However, compared to Facebook, passion-centric social network sites offer only a limited audience and they lack means to broadcast news to a large number of fans (Emmett, 2008), which may limit participation of celebrities. The findings about commercial uses were not supported by study 3, because the participants in study 3 did not view their jobs as their passion. Hence, they limited participation in passion-centric social network sites to leisure activities only.

5. The findings of study 1 and study 2 indicated that **people predominantly interact with strangers** on passion-centric social network sites. Study 2 also indicated the potentials of passion-centric social network sites to keep in touch, similar as on other social network sites like Facebook (Barkhuus & Tashiro, 2010; Ellison et al., 2007; Lampe et al., 2006) and even Flickr (Van House, 2007). Furthermore, study 2 showed the potential of passion-centric social network sites for online collaboration between people who know each other in person.
    The aim of study 3 was to expand on these findings in order to explore social interaction and collaboration between users with offline connections. Although all participants in study 3 had offline connections with other users, they also connected with strangers online. Building on previous work by Comber (2009), study 3 highlighted different kinds of strangers, offline ties, as well as hybrids of these two forms of connections on passion-centric social network sites.

6. Participation in passion-centric social network sites is motivated by the **combination of aspirations and sacrifices** involved in passion. All three studies showed aspirations and sacrifices cannot be separated. Accordingly, passions are constant sources of tension with other areas of everyday life. Based on previous work on communities of practice (Lave & Wenger, 1991), study 2 and study 3 suggested a career model in order to describe how passion develops and how the combination of aspirations and sacrifices changes. Study 2 showed that some people successfully turn their passion into a professional career, but the findings of study 3 departed from this observation. Several participants in study 3 had jobs related to their passion, but they only viewed their leisure activities as passion. Despite these

differences, the careers in both study 2 and 3 drew strong inspiration from established professionals in their fields.

Based on this understanding of passion, this work extends previous work on different kinds of online participation in social media (Fogg & Eckles, 2007; Ito et al., 2009; Preece, 2000) and passion-centric social network sites (Lange, 2007a; A. D. Miller & Edwards, 2007), by illustrating the influence of aspirations as well as sacrifices on online participation.

7. Tool, community, and theatre illustrate the **wide range of benefits** that people receive on passion-centric social network sites. Usually, social network sites emphasise a particular form of support, like weak-tie relationships on friendship-driven social network sites (Donath, 2007; Joinson, 2008), emotional support on health-centred social network sites (Ashkanasy et al., 2009), or recognition on professional social network sites (DiMicco et al., 2008). Study 1 showed that passion-centric social network sites integrate all of these benefits and thereby support the aspirations stemming from people's passion. Study 2 refined this assertion, showing that less experienced participants benefit more from informational and emotional support, whereas more experienced participants benefit stronger from recognition.

    Unlike in study 1 and 2, the offline connections with other users in study 3 also enabled instrumental support between people, which was at times coordinated through passion-centric social network sites. On the other hand, study 3 provided no evidence for social support, because it did not appear relevant in an activity that (unlike the passion in study 1 and 2) was neither physically demanding nor socially isolating. These findings underscore the strong influence of offline activities on online participation.

8. Friendship-driven social network sites (Beer, 2008b; boyd & Ellison, 2007) and professional social network sites (DiMicco et al., 2008) are deeply entwined with offline activities due to their offline connections with other users. Study 1 and 2 showed that interactions on passion-centric social network sites **are deeply entwined with activities and social processes offline,** even when people lack offline connections with other users.

    Study 3 further showed that when offline connections between users exist, they appear to shape the integration between online and offline activities in two interrelated ways. As expected, not only the tool, community, and theatre activities, but also the social context in which these activities take place are tightly integrated

between online and offline activities. Beyond that, the tool and theatre activities are tightly integrated with community activities, because most functional and self-promotional activities online and offline also serve the purpose of maintaining the relationship with other community members. Thus, passion-centric social network sites where users have also offline connections can provide a fruitful environment for social learning within communities of practice (Lave & Wenger, 1991) due to the tight integration of skill and identity development.

9. Study 1 and study 2 showed that some users of passion-centric social network sites receive **unwanted comments**, like comments with a sexual undertone, similar as on friendship-driven social network sites like MySpace and Facebook (boyd, 2008b; Ybarra & Mitchell, 2008).

This assertion was only partially supported in study 3. Some participants presented adult content online, but study 3 showed no evidence for comments with a sexual undertone. One possible explanation for the differences between the different study settings is that the participants in study 3 did not portray themselves in their images and therefore they did not attract unwanted comments on their profile. On the other hand, study 3 showed that people receive unwanted comments and contact requests from other users who sought to promote their achievements, in a similar way to what occurs on YouTube (Benevenuto et al., 2009).

10. Participation in passion-centric social network sites provides **limited opportunities for critical feedback and discussion.** Study 3 confirmed the lack of critical and constructive feedback on passion-centric social network sites, showing that critical feedback in a public setting between users with weak ties may lead to misinterpretation and spiteful feedback.

In contrast to study 1 and 2, study 3 unearthed critical discussions of community values in discussion forums. Such discussions were rare in study 1 and study 2, because most users shared similar values and competitions provided a clear separation between insiders and outsiders. However, the boundaries between insiders and outsider in study 3 were less well defined, and people with a wide variety of values negotiated these boundaries through critical discussions online. These discussions appear similar to discussions on friendship-driven social network sites between users with differing viewpoints on topics like politics and environmental sustainability (boyd, 2008a; Ellison et al., 2009; Kushin & Kitchener, 2009; Park et al., 2009). However, on passion-centric social network sites such discussions are critical to define the values and boundaries of passion-centric groups.

11. The comparison of the four groups (beginners to celebrities) in study 2 showed that the main focus of **online participation shifts from tool and community uses by beginners, to community and theatre uses by mentors, and theatrical uses for aspiring celebrities and celebrities.** The move from functional uses towards social uses of the passion-centric social network site reflects different needs for the development of skills and identities, as indicated by Lave and Wenger (1991). This finding diverts from previous work on social network sites in the context of large organisations, which found no evidence for differences between people at different career levels (Steinfield et al., 2009). On the other hand, this observation extends findings on the differences between amateurs and casual users of the passion-centric social network site Flickr (A. D. Miller & Edwards, 2007) by showing differences between different groups of amateurs and professionals. More broadly, the shift from tool and community towards theatre refines linear models of online participation like the behaviour chain of online participation (Fogg & Eckles, 2007) and the reader-to-leader framework (Preece & Shneiderman, 2009) by adding another dimension, which accounts for variations in online participation due to offline factors like the stage of passion. The findings of study 3 provided further support for the shift from tool towards theatre uses, even though none of the participants used the passion-centric social network site for passion-related work.

12. Study 2 and 3 showed that passion-related **activities increasingly shift from passion-centric social network sites to offline settings as people advance in their careers**. Study 2 indicated that this trend is partly related to the social isolation of beginners from their peers, but social isolation was not an issue in study 3. Despite their access to peers offline, the beginners in study 3 relied strongly on passion-centric social network sites to interact with peers and to develop their identity, whereas people with more experience may have other places offline to develop their passion-related identity.

6.8 Conclusion

The aim of this chapter was to evaluate the findings from study 1 and study 2 in a different passion-centric social network site. Study 1 and study 2 examined a passion-centric social network site where people generally interacted with strangers online, whereas study 3 explored a passion-centric social network site where people also had offline connections

with other users. Although study 3 facilitated both offline and online connections with other users, the findings still provided widespread support for the various kinds of online participation under the tool, community, and theatre themes established in study 1, as well as the career-related differences established in study 2.

While the main practices were similar, the interactions with offline contacts also led to variations within the tool, community, and theatre themes. The participants in study 3 used the passion-centric social network site to socialise with their peers and to keep in touch with them, which indicates an overlap in the practices on passion-centric social network sites and friendship-driven social network sites like Facebook. Furthermore, the findings of this study highlighted the 'social' in passion-centric social network sites, because the interactions with offline contacts led to a close integration of activities in the tool and theatre themes with community-related activities online and offline.

The discussion in this chapter indicated which findings are applicable to different settings, and which findings vary between different activities and social network sites. In highlighting the similarities and differences between different passion-centric social network sites this study helped to bring the thesis to closure.

Chapter 7

Discussion and Conclusions

7.1 Introduction

The previous chapter presented study 3, which evaluated the findings from study 1 and 2 through a comparison with a different passion-centric social network site, and thereby brought the thesis to closure.

The aim of this chapter is to discuss the findings of all three studies in order to answer the research questions established in chapter 2 and to highlight the main contributions of this research. This thesis generated three significant contributions to the field of human-computer interaction and related areas. First, it developed a novel understanding of participation in passion-centric social network sites. Second, it extended current understanding of relationships with others on passion-centric social network sites, and finally, it extended our understanding of passion and how it is both augmented and complicated through technology.

This chapter starts with a discussion of the research questions and the contributions of this research. Section 7.4 will address the limitations of the overall research process and the understanding developed in this thesis. Section 7.5 will suggest avenues for future work to develop our understanding of passion and social network sites further, and section 7.6 will discuss current trends in this area. I will close this chapter concluding that passion is only partially supported by current social network sites, which opens up new challenges for HCI. These challenges call for a holistic design approach to further support the positive aspects of passion and to minimise the complications and sacrifices involved in it.

7.2 Research Questions

The literature review in chapter 2 showed that the relationship between social network sites and passion is not well understood. Passion both enriches and complicates people's lives (Solomon, 1993; Vallerand et al., 2003). Previous work focussed on how passion-centric social network sites support the positive aspects of passion (Lange, 2007a; A. D. Miller & Edwards, 2007; Van House, 2007), but less was known about how these sites may influence sacrifices and risks inherent in passion. Thus, the overall research question of this thesis was:

> **Main research question:** How does participation in passion-centric social network sites influence one's passion?

I articulated three research questions, which guided the empirical work and contributed to answering the overall question. The first research question was concerned with the different kinds of participation that passion-centric social network sites facilitate:

> **Research question 1:** What types of participation do passion-centric social network sites support?

Research question 1 was addressed by the tool, community, and theatre themes established in study 1. Building on previous work on online participation (boyd & Ellison, 2007; Fogg, 2002; Ito et al., 2009; Preece & Shneiderman, 2009), these three themes extended our understanding of how individuals participate in passion-centric social network sites in order to achieve their goals. Individuals use passion-centric social network sites as tools to develop their skills and knowledge. They participate in communities on passion-centric social network sites in order to establish ties with peers and to develop their identity, and they use them as a theatre to promote their achievements and to gain recognition.

While passion-centric social network sites support people's passions, each theme also highlights limitations of online participation. The use of passion-centric social network sites as tools lacks constructive, critical feedback to recognise one's limitations. The reinforcement of boundaries to outsiders of the community can increase social isolation, and the lack of expressions of failure can increase the sacrifices related to passion.

Beyond the kinds of online participation, study 1 shed new light on the concept of passion. The findings showed that aspirations often demand sacrifices that appear obsessive to outsiders. Furthermore, the outliers in this study indicated that the aspirations and challenges as well as the participation in passion-centric social network sites may vary between individuals at different stages of their passion-related careers, which led to the second research question:

Research question 2: In what ways does participation in passion-centric social networks sites facilitate the development of passion?

Study 2 described the development of passion as a multi-staged career trajectory that connects amateurs and professionals in the same domain. Building on career trajectories in communities of practice (Lave & Wenger, 1991; Wenger, 1998), this study showed that individuals have different aspirations and challenges depending on their career stage, which were also reflected in their participation in passion-centric social network sites. Building on the tool, community, and theatre themes from study 1, the findings showed that beginners benefited from passion-centric social network sites as tools to develop their skills, and they used these sites to establish connections and an identity in the community. Mentors participated in passion-centric social network sites to develop their identity further by providing support to others in the community, whereas aspiring celebrities appropriated these sites to promote their achievements and the commercial services they offered.

Conversely, study 2 also highlighted how the career stage influences online participation. The findings indicated a shift from passion-centric social network sites towards other settings in the course of passion-related careers. Beginners and mentors had the most varied uses of passion-centric social network sites, using them as tool, community, and theatre. Aspiring celebrities rarely used these sites as tools and community, because they had peers and other resources in offline settings to learn and to socialise. They participated in passion-centric social network sites primarily to promote their achievements and to develop their professional careers further. The practices of aspiring celebrities on passion-centric social network sites are similar to those of users of professional social network sites in large organisations, like Beehive (DiMicco et al., 2008; Steinfield et al., 2009), and for professional networking, like LinkedIn (Skeels & Grudin, 2009).

Research question 3: Do the stages in the development of passion and the related types of online participation apply to passion-centric social network sites where individuals also have some form of offline connection?

Research question 3 was answered by applying the findings from study 1 and study 2 to a different passion-centric social network site. The choice of a setting where users had offline connections with other users demonstrated that passion-centric social network sites not only support interactions between strangers, as asserted by boyd and Ellison (2007), but also between people who know each other in person. These people use passion-centric social network sites to keep in touch with friends, colleagues, and other people in their environment

who share their passion, similar to friendship-driven social network sites like Facebook (Donath, 2007; Ellison et al., 2007; Lampe et al., 2006).

The findings of study 3 supported and further refined the main concepts of passion and related careers established in study 2. Although social isolation was not a concern in study 3 due to the offline connections with other users, the findings highlighted other sacrifices that the participants made for their passion, like the time and the financial resources they invested into it. Furthermore, while the participants in study 3 rarely aspired to turn their passion into a professional career, they still followed similar career trajectories from beginners to mentors and aspiring artists as the individuals in study 2, and they also drew inspiration from established professionals in their field.

The findings of study 3 also supported previous findings on participation in passion-centric social network sites and the mutual influences with passion-related careers. As in study 1, the participants used passion-centric social network sites as a tool, community, and theatre. Due to the offline connections with other users, these three kinds of online participation were closely entwined with offline activities. Similar to study 2, beginners benefited from the development of skills and knowledge through tools, mentors focussed on supporting others in the community, and aspiring artists used it predominantly as a theatre to express themselves and to gain recognition for their work. Furthermore, the findings provided further evidence that more experienced individuals have a larger variety of peers and resources outside passion-centric social network sites than beginners, and thus they carried out some activities, i.e., tool-related activities, in offline settings.

Overall, the findings of all three studies demonstrated in different contexts that participation in passion-centric social network sites helps people to learn and to develop their identities and thus to develop their passion. Despite the various benefits of these sites for aspirations related to passion, the findings also indicated that participating in passion-centric social network sites might further complicate passion. Limitations of online participation, like the lack of critical, constructive feedback and expressions of failure online, have the potential to increase sacrifices that are inherent in passion. Addressing these sacrifices constitutes an avenue for further research on passion-centric social network sites as well as a practical challenge for designers, community managers and users of such websites.

7.3 Overview of Significant Contributions

This thesis addressed a gap in current understanding of social network sites that are designed to support passion. I summarised the novel findings of all three studies as a list of 12 assertions in the study chapters (see section 4.7, 5.7, and 6.7). In the following discussion I will expand on these assertions to discuss the theoretical contributions established in this thesis as well the practical implications following from them. The three main contributions of this thesis are to extend our current understanding of:

1. Participation in passion-centric social network sites

2. Social structures on social network sites

3. Passion and its support through social network sites

7.3.1 Contribution 1: Participation in Passion-Centric Social Network Sites

One major contribution of this thesis is the development of an understanding of participation in passion-centric social network sites described by three novel themes of 'tool', 'community' and 'theatre' (assertion 1-4 and 7) and their limitations (assertion 9 and 10). These themes were established in study 1 and unpacked how people integrate passion-centric social network sites with activities related to their passion for functional, social and self-presentational purposes. They highlight similarities as well as differences to participation in friendship-driven social network sites (Ellison et al., 2007), professional social network sites (DiMicco et al., 2008) as well as other forms of technology-mediated communication like blogs or discussion forums (Fogg & Eckles, 2007; Preece & Shneiderman, 2009). Study 2 and study 3 demonstrated that the three themes apply to different user groups—beginners, mentors, and aspiring celebrities—as well as to different activities and passion-centric social network sites (assertion 11 and 12).

Different Kinds of Participation

This thesis established three novel themes to describe different kinds of participation in passion-centric social network sites. The tool theme describes how online participation extends the skills and knowledge related to an activity. This theme supports findings from other studies about the importance of amateur online communities for sharing information

(Torrey et al., 2009), comparisons (Fogg, 2002; Khaled et al., 2006), and inspiration (Cook et al., 2009).

The community theme illustrates how online participation helps individuals to establish connections with peers and an identity within the context of the passion. The findings confirm previous work (Lange, 2007a) showing that passion-centric social network sites help individuals to extend their networks with strangers online, which is different from the connections with existing relationships with friends on Facebook (Donath, 2007; Ellison et al., 2007; Lampe et al., 2006) or with work colleagues on professional social network sites (DiMicco et al., 2008). Despite the prevalence of networking with strangers, this thesis also demonstrated that some users keep in touch with their offline peers through passion-centric social network sites, which shows that practices on passion-centric social network sites and on friendship-driven social network sites like Facebook overlap (Donath, 2007; Ellison et al., 2007; Lampe et al., 2006). Furthermore, individuals who have turned their passion into a professional occupation participate online to establish networks with colleagues that can further their careers, showing that the practices on passion-centric social network sites also overlap with those on professional social network sites within large corporations (DiMicco et al., 2008; Steinfield et al., 2009).

The theatre theme shows how passion-centric social network sites allow people to present their achievements and to exchange recognition. Users are selective in the contents they present online. They put predominantly positive aspects about themselves and their achievements on passion-centric social network sites, similar to Facebook users (Krasnova et al., 2009; Pearson, 2009). They receive valuable feedback and recognition from other users who can relate to the achievements, which supports self-affirmation, as on Facebook (Toma, 2010), and provides them with motivation to strive for further goals in their passion. At first sight this interplay of self-promotion and recognition appears similar to narcissism and popularity contests on friendship-driven social network sites (Buffardi & Campbell, 2008; Tong et al., 2008). Upon closer examination, the achievements presented online are not purely about the presentation of the self, but more similar to creative self-expression, similar to bloggers (Faulkner & Melican, 2007) or media creators on YouTube and MySpace (Ito et al., 2009).

Limitations of Online Participation

In addition to the benefits of online participation, this thesis also developed an understanding of the limitations of online participation that complicated passion. Some limitations are only

relevant to certain activities, e.g., where the object of the passion is the own body. In such settings the presentation of images of oneself online can lead to unwanted feedback with sexual undertones, which is similar to findings from MySpace and Facebook (boyd, 2008b; Ybarra & Mitchell, 2008). Similarly, passion-centric communities with a marginalised status in the general public, like the bodybuilders in study 1 and 2, risk further marginalisation when they reinforce the boundaries between community members and outsiders online. Stebbins (1979, 2007) argues that even amateurs in more popular domains, like baseball or theatre, risk a marginal status due to their serious engagement in the activity. However, study 3 did not support this assertion, possibly because photography was such an omnipresent activity in the study location.

While some limitations occur only within specific domains, two limitations appear to complicate the practices of individuals across different settings. First, users of passion-centric social network sites generally avoid presentations of failures online. As on other social network sites, users are selective in their online self-presentation in order to present themselves in a positive light (Krasnova et al., 2009; Pearson, 2009). The lack of presented failures diminishes learning opportunities, and it limits opportunities for individuals who struggle with their passion to express their difficulties and to receive support.

Furthermore, the feedback that users receive on passion-centric social network sites is rarely critical of their achievements and approaches. The positive side of this finding is the lack of flaming and hate messages, which diverts from findings on other social network sites like YouTube (Lange, 2007b). The downside of this finding is that participants rarely receive critical and constructive feedback online that they need to improve their passion-related practices. Such feedback may be difficult to obtain online due to the lack of mutual responsibility between weak ties on social network sites (Donath, 2007) and partly because feedback on social network sites is generally public and permanently stored (boyd, 2008b). Thus, facilitating environments online where people can exchange critical and constructive feedback remains an open issue for further work on passion-centric social network sites, in particular for activities where the lack of critical feedback may put the health and wellbeing of individuals at risk.

Variations in Online Participation Between Different User Groups

All study participants in this thesis were active and committed users of their respective passion-centric social network site. Despite the commitment, the comparison of individuals at different stages of their passion-related careers in study 2 and study 3 highlighted also

variations in their online participation. Participation in passion-centric social network sites shifted from tool and community uses by beginners towards community and theatre uses by mentors, and towards theatrical uses for aspiring celebrities and celebrities. These shifts reflect the different needs for the development of skills and identity at different stages of a career trajectory, as discussed in study 2 and study 3. These findings extend previous studies of Flickr that highlight differences between casual photographers and serious amateurs (A. D. Miller & Edwards, 2007), showing that variations also exist within the subgroup of amateurs. At the same time, these findings divert from previous work on social network sites in the context of large organisations, which found no evidence for different social network site uses between people at different career levels (Steinfield et al., 2009).

The differences between beginners, mentors, and aspiring celebrities in their tool, community, and theatre participation divert from other frameworks for online participation. According to the behaviour chain of online participation (Fogg & Eckles, 2007), all participants in this thesis were at the stage of 'true commitment', which means they were loyal and active users of a website who create content and value. The findings of this thesis extend the behaviour chain of online participation by showing the differences in the content and value that truly committed users create, depending on whether they are beginners, mentors or aspiring celebrities in their passion.

Furthermore, the differences between beginners, mentors, and aspiring celebrities also extend the reader-to-leader framework (Preece & Shneiderman, 2009) by showing how the offline context, in this case the stage in the development of passion, influences the development of online participation from reader to leader. This thesis shows that 'leaders', people who promote participation and help novices, are generally not the people with the most experience in their passion (the aspiring celebrities) but the mentors. This group of amateurs and professionals helps others with information and contributes to community activities. The aspiring celebrities and beginners in this research can best be described as 'collaborators' according to Preece and Shneiderman's framework. Despite being at the same stage of the reader-to-leader framework, the findings of this thesis show that their online participation differs due to the differences in their aspirations and sacrifices. Beginners use websites as tool and community to develop skills and connections with peers, whereas aspiring celebrities appropriate these sites as a theatre to promote their achievements and to attract clients.

Practical Implications: Promote Achievements Rather Than Tools

The tool, community, and theatre themes and the stages of beginners, mentors, and aspiring celebrities provide a framework to analyse existing web-based services. Beyond that, these themes can be viewed as a guide for the design of new web-based services to illustrate different activities and social processes that are critical to a wide range of passion activities.

While all themes highlight important activities, the findings of this thesis suggest that web-based services need to focus particularly on the promotion of achievements in order to attract participation. First, almost all participants from beginners to aspiring celebrities, and even some celebrities, used passion-centric social network sites as a theatre to promote their achievements. Furthermore, in all three studies people appropriated tool and community features to promote themselves. For example, study 1 showed how users regularly update their profiles to gain visibility on the BodySpace homepage. Study 2 illustrated how professionals appropriate profile photos to advertise their products, and study 3 showed different strategies applied by the users to attract views in order to appear in the list of the most popular photos on Flickr. These examples also show that the passion-centric social network sites studied in this research successfully implemented theatre features. Fore example, the BodySpace homepage and Flickr's Explore website provide visibility for popular users and thus stimulate different kinds of participation from posting and updating content to commenting between strangers. Similarly, on DeviantArt and Scratch the website administrators manually select contributions and promote them to other users (Comber, 2009; Sylvan, 2010). Although the promotion of achievements is primarily a theatre activity, it is also relevant for community building, because people can observe and learn about what counts in a group, and it also has a tool purpose in providing inspiration and points of comparison for people. Thus, contrary to studies that focus only on learning through information sharing and functional tools on the web (Torrey et al., 2009), the findings of this research suggest that sites that successfully promote the achievements of their users are likely to increase participation.

7.3.2 Contribution 2: Social Structures on Social Network Sites

In addition to establishing an understanding of online participation, this thesis also extends current understanding of the kinds of relationships people have with other users of social network sites. The findings challenge several assumptions in the related literature about the differences between friendship-driven social network sites like Facebook, passion-centric

social network sites, and other forms of technology-mediated communication like discussion forums and bulletin boards. Based on assertion 3, 5, and 8, this thesis contests the following three claims made by boyd and Ellison (2007):

1. Passion-centric social network sites connect primarily strangers, rather than offline contacts

2. Passion-centric social network sites mainly support personal networks, rather than communities

3. As a result of the first two points, passion-centric social network sites lack the integration with offline experiences that friendship-driven social network sites offer

Offline Connections with Peers

boyd and Ellison (2007) write that passion-centric social network sites help strangers to establish online relationships based on their shared interests. One contribution of this thesis is to challenge this assertion by showing that users of passion-centric social network sites connect with a wide variety of individuals online, strangers as well as people they know offline, similar to friendship-driven social network sites (Ellison et al., 2007). The findings of study 2 also illustrated how individuals use passion-centric social network sites to keep in touch with their clients and to establish new relationships for their work, similar to users of professional social network sites in large organisations (DiMicco et al., 2008).

This thesis unearthed a variety of different strangers and offline connections as well as hybrid forms of relationships, which shows that the terms 'strangers' and 'offline connections' suggested by boyd and Ellison (2007) are insufficiently varied. As indicated by other studies of passion-centric social network sites (Comber, 2009), this thesis showed that individuals connect with strangers whose work they admire and vice versa. In some instances, such connections with strangers developed into ongoing relationships with offline meetings. Conversely, people used passion-centric social network sites to articulate their offline connections with offline peers, in a similar way to what occurs on friendship-driven social network sites (Ellison et al., 2007). Facebook uses a shared year at school or university as a common offline element to connect individuals, whereas passion-centric social network sites connect participants in shared offline events or clubs, even if they have not actually met in person. These findings show that although these sites have been designed to support interest-based participation, they also facilitate friendship-driven and work-based participation.

Personal Networks and Communities

In addition to extending our understanding of personal networks, this thesis also shows how these personal networks intersect with communities on passion-centric social network sites. Descriptions of online communities generally focus on groups with a shared interest and a common identity and culture, whereas personal networks generally describe relationships as dyadic structures of one person with multiple individuals with heterogeneous values and identities (Willson, 2010). While Willson (2010) writes that community and personal networks are merely different perspectives on social structures online and offline, boyd and Ellison (2007) see these two perspectives also built into the ways online technologies are structured. They argue that the structure of personal networks on social network sites sets these sites apart from other technologies for online groups, especially from discussion forums that are structured by shared interests within a community. Hence, discussion forums represent social relations in everyday life less accurately than social network sites:

> *"Early public online communities such as Usenet and public discussion forums were structured by topics or according to topical hierarchies, but social network sites are structured as personal (or ''egocentric'') networks, with the individual at the center of their own community. This more accurately mirrors unmediated social structures, where 'the world is composed of networks, not groups' (Wellman, 1988, p. 37)." (boyd & Ellison, 2007, p. 219)*

This thesis contests this view that social network sites purely embody personal networks, and it demonstrates how passion-centric social network sites support both personal networks and communities. All passion-centric social network sites studied in this thesis provided technological structures to accumulate a personal network of peers, friends, colleagues, and clients. However, the website for study 3 also provided technological structures to congregate groups online. These online group structures provided a group pool to post photos and a group discussion forum. As discussed in section 6.5.3, ongoing social interactions through these discussion forums gave rise to the formation of a community with a shared interest and location. Even when such technological structures for the formation of communities were absent (as in study 1 and study 2), the participants still expressed a feeling of connectedness to a larger community on the passion-centric social network site, which shares similar values, provides a sense of belonging, and offers support and empathy, similar to more traditional forms of online communities (Maloney-Krichmar & Preece, 2005; Rheingold, 2000). These findings support related work on YouTube, which reports that people see passion-centric social network sites as a community even though the technology is predominantly structured around personal networks (Rotman et al., 2009).

The community perspective was a central theme throughout all three studies of this thesis. However, the findings showed that interactions with individuals on passion-centric social network sites outside the context of a community are equally important. For example, the participants in study 3 added not only photographers from within their club as contacts, but also different types of strangers and even people whose photos they did not like, because of their personal relationships with them. Therefore, the findings of this research indicate that the social processes on passion-centric social network sites may be best understood through a combination of the personal network and community perspective.

Integrating Online and Offline Practices

This thesis also extends current understanding of how passion-centric social network sites are integrated with offline activities and social processes. boyd and Ellison (2007, p. 223) write about friendship-driven social network sites that "online and offline experiences are deeply entwined", because they support pre-existing offline relationships. They further argue that these offline relationships are "one of the chief dimensions that differentiate SNSs from earlier forms of public CMC such as newsgroups" (2007, p. 221), and due to the lack of offline connections asserted by boyd and Ellison (2007), also from passion-centric social network sites.

Again, this thesis challenges boyd and Ellison's view, showing that passion-centric social network sites are tightly integrated with offline activities and relationships related to passion. As discussed above, study 3 demonstrated that users of passion-centric social network sites also use passion-centric social network sites to keep in touch with offline connections, similar to users of friendship-driven social network sites (Ellison et al., 2007). Second, study 2 highlighted that professionals integrate passion-centric social network sites into their passion-related work in order to establish contact to new clients and to collaborate with existing clients in between offline meetings. Finally, the findings showed that participation in passion-centric social network sites is tightly integrated with offline activities even when offline connections with peers or clients are absent. The aspirations and sacrifices inherent in passion motivate individuals to participate in passion-centric social network sites to gain skills and knowledge, develop an identity, and exchange recognition for their achievements. All these experiences feed back into the practices surrounding their passion offline.

Practical Implications: One-Sided Ties and Transparency

The above findings indicate a diverse picture of social processes on passion-centric social network sites, and the technical features of these sites also reflected this diverse picture. In contrast to Facebook, BodySpace and Flickr allow people to establish one-sided relationships, where one person follows the updates of another user, but not vice versa. BodySpace uses the label 'stalking' for the list of people one follows, which may discourage users from merely sending out friend requests, and instead encourage them to establish a relationship through comments and messages first.

Beyond that, some passion-centric social network sites facilitate interest-driven participation as well as friendship-driven participation. As discussed above, however, interactions across different social spheres online and offline may lead to misunderstandings between groups with different values. For passion-centric social network sites that get used in such diverse ways, like Flickr and YouTube, previous research advocates private profiles and other privacy settings to give users control about what information they want to make available to others (A. D. Miller & Edwards, 2007), similar as on friendship-driven social network sites (boyd & Hargittai, 2010; Gross et al., 2005; Stutzman & Kramer-Duffield, 2010).

In contrast to the above recommendations for social interaction across different social spheres, the findings of this research show that transparency rather than privacy is important for online social interactions between strangers. When offline connections are absent, individuals form impressions of other users based on photos, personal descriptions, and links to friends on the profile, before they establish connections online. BodySpace even increases transparency by making information like comments left on other profiles, friendship requests, and login dates visible on the profile. Transparency is also critical on a community level, because new users can observe interactions between group members to learn what counts, before they actively contribute to them. Lange's studies of YouTube participation shows that users apply different strategies to protect their privacy in public settings beyond merely setting content to private (Lange, 2007a). Similarly, participants in all three studies used strategies like profile photos that did not reveal their face and fictional user names to protect their privacy. Thus, passion-centric social network sites that support or even increase transparency are likely to facilitate more connections and support between strangers than those that constrain transparency by keeping profile information private.

7.3.3 Contribution 3: Passion and Careers on Social Network Sites

The third major contribution of this thesis is to extend current understanding of passion in the context of technology use. As discussed in the literature review in chapter 2, previous work on passion-centric social network sites often used the term passion as a synonym for interests, without considering the dual nature of harmonious and obsessive passion (Vallerand, 2008, 2010; Vallerand et al., 2003). While indeed many individuals may participate in passion-centric social network sites simply to pursue an interest, the findings demonstrated that the activities of the participants in this thesis went beyond that. Based on assertion 6, 7, 10, 11, and 12, the following two contributions highlight the differences between passion and interests. Furthermore, they show the strengths and weaknesses of social network sites for passion:

1. Passion combines aspirations, commitment and sacrifices. While social network sites support people with their aspirations they rarely address sacrifices.

2. The development of passion may foster careers on the margin between work and leisure. While social network sites support leisure activities they appear limited in their support for passion-related work.

Aspirations, Commitment and Sacrifices in Passion

The literature review in chapter 2 showed that the term passion has many different meanings. In the context of interests and activities, Vallerand and colleagues (2003, p. 756) define passion as "a strong inclination toward an activity that people like, that they find important, and in which they invest time and energy." This view distinguishes between harmonious passion and obsessive passion. Both kinds of passion are important for a person, but only an obsessive passion leads to an uncontrolled urge to engage in the related activity, which in turn leads to conflicts with other life activities.

The findings of this thesis support Vallerand's basic definition of passion, but they contest the distinction between harmonious and obsessive passion (Vallerand, 2008; Vallerand et al., 2003). First, all three studies demonstrated that passion is characterised by strong commitment to the activity in order to pursue one's aspirations. The study participants showed their commitment through their ongoing participation in the passion, their drive to improve their skills and knowledge, and their attachment and devotion for the activity. Furthermore, the participants demonstrated their commitment on a social level through their connectedness and their identification with a community of peers, and also through their

criticism and rejection of those who only casually engage in the activity. This sense of commitment neither reflects the harmonious passion that stops when the passion leads to negative outcomes, nor does it reflect the obsessiveness that occurs when a person's feelings and self-esteem are so attached to an activity that he or she "cannot help but to continue activity engagement even when positive returns are no longer forthcoming and the activity has become detrimental to them." (Vallerand et al., 2003, pp. 765-766). Instead, the findings of this research show that being passionate involves finding a balance in the commitment in order to reduce or to avoid detrimental outcomes, whilst remaining active when difficulties need to be overcome.

The commitment to an activity also implies that individuals are prepared to make sacrifices for their passion. Vallerand and colleagues (2003, p. 756) define passion as an activity in which people "invest time and energy", which indicates a potential for conflict, yet they relate sacrifices only to obsessive passion which inherits "conflict with other life activities" (Vallerand, 2008, p. 3). The findings of this thesis showed that sacrifices were integral to the activities of all participants. However, the participants viewed these sacrifices as something that set them apart from people with a mere interest, rather than as an obsession. The bodybuilders in study 1 and study 2 celebrated the ability to endure sacrifices as part of their culture, which distinguished them from casual gym users. Similarly, the photographers in study 3 distinguished themselves from casual photographers through the sacrifices and challenges in their traditional approach to photography. Although some of the photographers framed their sacrifices as something they enjoyed, they expressed that these activities constitute sacrifices for outsiders. This emphasis on sacrifices distinguishes the concept of passion from related concepts like serious leisure (Stebbins, 1979, 1992, 2007) and communities of practice (Lave & Wenger, 1991; Wenger, 1998). Both concepts highlight the importance of commitment, but they place less emphasis on the challenges and difficulties that emanate from ongoing participation in an activity.

The combination of aspirations and sacrifices is significant for understanding participation in social network sites, because the findings of this research showed that aspirations and sacrifices are supported differently online. As discussed in detail in section 7.3.1, the different types of participation under the tool, community, and theatre themes support people in pursuing their various aspirations, like developing basic skills and gaining recognition. In contrast to most previous work on passion-centric social network sites,[23] this research also

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[23] Lange's (Lange, 2007b) discussion of hate messages on YouTube is a notable exception from the focus on positive aspects of participation.

examined the limitations of participation. The limitations comprised a lack of critical and constructive feedback, a limited amount of critical discussion, and a lack of presenting failures and struggles. The findings indicate that these limitations may be attributed to the public setting and the aim to present oneself in a positive way, as on other social network sites (Krasnova et al., 2009; Pearson, 2009). These limitations of passion-centric social network sites are significant, because they constrain the discussion of controversial topics, like risk-taking. Furthermore, they make it complicated to present one's own sacrifices and to address them when observed on other users' profiles. Thus, this thesis extends prior work on passion-centric social network sites (A. D. Miller & Edwards, 2007; Rotman et al., 2009; Van House, 2007) by showing that while these sites support people with their aspirations, they appear to ignore sacrifices, and as a result, they may further exacerbate them.

Career Stages in the Development of Passion

Vallerand (2008, p. 9) suggested that future work on passion should explore "the potential existence of stages of passion toward a given activity." A further contribution of this study is to suggest an understanding of different stages in the development of passion from beginners to mentors and aspiring celebrities and artists, which in turn highlights opportunities and limitations of technologies. The understanding presented in this thesis builds on the work on communities of practice (Lave & Wenger, 1991; Wenger, 1998) and serious leisure (Stebbins, 1979, 2007), and it also extends both of these perspectives. Both bodies of work suggest that individuals develop their skills, knowledge, and identity through ongoing participation in the activities of a larger community. The communities of practice perspective characterises career stages through the status within a community based on an individual's skills and identity, with beginners in peripheral locations, and more experienced members in more central positions. While skills and identity are crucial, this thesis also highlights the emotional attachment and the importance of gratifications arising from passion-related activities and careers, which are less visible in the work on communities of practice (Lave & Wenger, 1991; Wenger, 1998). Especially amateurs justify their unpaid activities, like the regular workouts of the bodybuilders in study 1 and 2 and the extra work required by traditional forms of photography in study 3, with their love for the activity and the enjoyment they derive from the results they get.

The serious leisure perspective (Stebbins, 1979, 2007) highlights the importance of the relationships between amateurs and professionals for the development of passion-related careers. While some amateurs turn their leisure activity into a professional occupation, this

thesis also demonstrates that carrying out the same activity in a professional manner changes the aspirations considerably, even to the extent that professional work may epitomise the opposite of passion. Amateur and professional activities demand commitment and sacrifices, but study 3 illustrated that professional work can endanger the emotional attachment and the enjoyment that individuals associate with passion. Despite these differences, study 2 and 3 underscored that amateurs derive important inspiration from professionals in their domain.

The aspirations and sacrifices at different career stages from amateurs to professionals highlight different opportunities and limitations of web-based services for career advancement. As discussed in section 7.3.1, the tool, community, and theatre themes highlighted different opportunities for learning, socialising, and gaining recognition in the context of passion. The findings of study 2 and 3 also showed that many of these activities shift from passion-centric social network sites to other settings online and offline as people advance in their careers, which indicated limitations of passion-centric social network sites for professional work related to a person's passion. The tool use was less relevant for professionals, because they generally had people in other settings that they asked for information. Furthermore, the professionals argued that offering their own knowledge for free online would undermine their ability to make a living from it, similar to settings for creative work (S. Humphreys, 2008). Beyond that, study 2 showed that professionals had to be careful when they offered their services and products online, because unlike MySpace and Facebook (Beer, 2008a; Suhr, 2009), the passion-centric social network sites investigated in this thesis prohibited commercial activities. Finally, some participants in study 2 recruited clients on passion-centric social network sites for coaching and mentoring work. However, these sites did not provide them with access to decision-makers in large companies that could sponsor their activities, because these decision-makers were generally not passionate themselves, and accordingly, they were not active on passion-centric social network sites.

Practical Implications: Privacy, Anonymity and Commercial Features

The discussion of passion shows that existing passion-centric social network sites support people with their aspirations, but that they are limited in allowing people to express and to discuss sacrifices and failures. The findings indicate that the public setting and the aim to present oneself in a positive way online contribute to the lack of such discussion. Thee observations suggest at least two different ways to address this limitation. First, passion-centric social network sites can introduce privacy settings, which prevent the general public and other users from being able to access personal information online in order to facilitate

expressions of sacrifices without losing face. Related research on social network sites for health-support groups demonstrate that this is a feasible option (Ashkanasy et al., 2009), e.g., through groups on social network sites that are only accessible and visible to members to facilitate private discussion of controversial issues and expressions of failure. However, enhancing privacy stands in opposition to the argument for transparency discussed in section 7.3.2, and in turn, it may complicate the processes of establishing and maintaining relationships between strangers.

Alternatively, passion-centric social network sites can address this challenge by focussing on the issues arising from people's desire to present themselves in a positive way. As discussed in the theatre theme, people receive recognition for the achievements they post on their profile, and posting sacrifices may diminish their positive self-presentation. This suggests that the removal of the link between their profile and contents that may diminish their reputation, may facilitate more expressions of failure and constructive feedback. One way to achieve this is to establish spaces for interaction where users can express themselves in an anonymous way. For example, users could join groups on passion-centric social network sites that are publicly visible, yet their postings are anonymous and cannot be linked back to their profile. While related work suggests that anonymity enhances the disclosure of sensitive information online, it also suggests a risk of inappropriate comments, and such an approach may require careful moderation (Joinson & Paine, 2007). Instead of anonymity, passion-centric social network sites can provide users with control over the temporality of their online contributions. Content posted on social network sites is generally permanently stored and searchable, and therefore it can complicate sensitive social interactions (boyd, 2008c). However, novel systems could allow users to delete their content later, or they could be set up to fade out and 'forget' content after a while (Bannon, 2006). Again, this would diminish the link between the content one posts and the personal profile on a site, and it may therefore encourage people to express sacrifices and to provide critical and constructive feedback.

The second point in the above discussion of passion and technology was that while passion-centric social network sites serve beginners and mentors well, they provide only limited support for aspiring celebrities and celebrities. The findings of all studies showed that celebrities and aspiring celebrities provided important inspiration for all other groups. Study 2 further showed how aspiring celebrities appropriated profile photos and status messages to promote commercial work to other users, even though this constitutes a violation of the terms of use. The commercial uses of passion-centric social network sites despite the risk of being expelled from these sites underline the importance of these sites for aspiring

celebrities. Based on the findings from this thesis, passion-centric social network sites will gain their full power by using commercial features, such as marketplaces for goods and services, to draw more professionals to sites and to stimulate interaction between amateurs and professionals. Sites that use this approach are likely to be more successful than those that try and prohibit commercial activity.

7.4 Limitations and Recommendations

In chapter 3 I discussed three quality criteria that guided the research process: auditability, credibility, and applicability. I used these criteria in chapter 4, 5, and 6 to critique the three studies, and I will discuss them again here to evaluate the overall research process, to highlight the limitations of the contributions developed in this thesis, and where applicable, to provide recommendations on how to address these limitations.

7.4.1 Limitations of the Auditability of the Research Process

The criterion of auditability suggests that the research process should be consistent over time and across researchers and methods, as well as transparent for readers (Miles & Huberman, 1994). To make my research process transparent to readers I described all steps of the data collection and analysis in detail in chapter 4, 5, and 6. Furthermore, appendix A, B, and C include material like plain language statements, interview guides, fieldnotes, excerpts from interview transcripts, and memos, to lay out how I communicated with the study participants, the data that I collected and created, and how I interpreted and analysed the data. Likewise, I strove for consistency both within and across the three studies. All three studies were guided by the same methodological assumptions, as discussed in chapter 3, and a similar combination of methods to ensure consistency between them.

Despite my attempts to strive for transparency and consistency, my research process was limited in at least two ways. First, the integration of visual methods in study 2 and 3 was challenging and led to different results between the two studies. Furthermore, I carried out this research independently and therefore the analysis only partly received the review through other people that Miles and Huberman (1994) recommend.

Challenges in Integrating Visual Methods into the Fieldwork

As suggested by the literature on visual methods in qualitative research (Dufon, 2002; Epstein, Stevens, McKeever, & Baruchel, 2006; Heath & Hindmarsh, 2002; Pink, 2007), the video and photo elicitation method in study 2 and study 3 facilitated reflection during the interviews and led to rich data. However, integrating visual methods into the fieldwork approach also introduced various challenges. The presence of a video camera in study 2 appeared to influence the study participants, which may have led to inconsistencies in the interview data. The set-up of the video camera was a distraction from establishing rapport with the participant. Some participants seemed to forget the presence of the camera during the course of the interview, yet I received many unsolicited comments only after turning off the camera. Some participants even explicitly stated that they would only talk about controversial aspects of their passion 'off camera', which shows that the presence of a recording device influenced the interviews. Throughout all studies I triangulated different data collection methods, including unobtrusive collections of online data, to compensate for a possible bias due to the presence of video cameras and audio recordings. If video recordings are required, a second person to assist with the video and the sound recording while the researcher establishes rapport, would further help to mitigate this problem.

Furthermore, integrating visual data into the interviews for discussion and reflection yielded different results. In study 2 I edited the video recordings from the first interview, juxtaposed contradicting statements, and played them back to the participants in the follow-up interviews. These videos led to less discussion during the interviews than the photos selected by the participants themselves for the interviews in study 3. Partly, this may be a reflection of my learning process on how to integrate visual data into the interview process and how to ask questions that elicit reflection. Possibly, study 3 yielded more reflective discussion because the participants themselves created and selected the photos, and thus they had already started to reflect on this material prior to the interview. While visual data created by the researcher serves as a useful prompt during interviews, I would recommend to get the study participant involved in the selection and creation of visual data to prompt reflection prior to the interview. This approach is similar to studies that have used 'cultural probes' (Gaver et al., 1999) as a social science method to collect data and prompt discussion (Boehner et al., 2007; Graham et al., 2007).

Single Analyst

The analysis of this research was carried out by a single researcher, which may have limited the consistency and thus the auditability of this research. Qualitative researchers acknowledge that the same set of data may be interpreted in different ways by different people (Armstrong, Gosling, Weinman, & Marteau, 1997), yet Miles and Huberman (1994) argue that multiple researchers should be involved in the analysis to cross-check the coding, and colleagues or peers should be involved to review the research process.

While I carried out the analysis largely independently, I also sought to include other researchers into various stages of the analysis process to help me interpret the data and to review my process. First, my supervisors guided me through the all phases of the analysis, from the preliminary analysis during data collection to writing up the conclusions. My second supervisor (Peter Thomas) helped me to code and interpret excerpts from interview transcripts and videos of interviews during study 1 and study 2, and I discussed my activities in the field and my interpretations of the data with both of my supervisors on an ongoing basis. Second, I discussed my research with multiple colleagues in my research group as well as with various HCI scholars during my fieldwork in California and during my overseas studies in the UK. Third, I gave more than 20 formal presentations at conferences, workshops, lectures and doctoral colloquia. The discussions with the audience helped me to interpret the data in different ways, in particular, to develop an understanding of the concept of passion. Finally, the peer reviews for the publications arising from this thesis also contributed to my interpretation of the data, in particular, to explain the differences between the online practices of beginners and more experienced individuals in study 2. All these interactions with other scholars contributed towards my analysis, and they also served as an audit of my analysis process.

7.4.2 Limitations of the Credibility of the Findings

The criterion of credibility emphasises that the findings need to be trustworthy and believable to the readers as well as to the people studied (Corbin & Strauss, 2008). I used various member checking techniques to discuss the emerging findings with the study participants to ensure their trustworthiness. As recommended by Cho and Trent (2006), I used the follow-up interviews in study 2 and 3 to discuss my observations in the field and my interpretations with the participants. Further, I emailed various study participants drafts of papers and thesis chapters, and I incorporated their comments into my writing. Likewise, I

also presented the findings to scholars in HCI, i.e., through presentations at conferences and workshops, and through peer-reviewed publications, which are included in appendix D.

These activities also included various challenges. First, immersing myself into the field as well as gaining distance from it for the analysis was challenging. Furthermore, I could not check my findings with representatives from all the groups of users that I discussed, and in these cases I relied on interviews with participants from related groups to establish and to discuss my findings.

Balancing Immersion in the Field and Analytical Distance

I sought to immerse myself into the settings that I studied in order understand online participation and passion from the perspectives of the participants and to generate findings that are credible to them. I also sought to distance myself from the field for a critical analysis of the data in order to shed new light on findings in related work on social network sites.

Balancing immersion and analytical distance contained several challenges. First, developing the perspective of an insider was not straightforward because of my initial lack of expertise in both study settings. The literature on fieldwork suggests that the researcher only needs to be an "acceptable incompetent" (Neuman, 2006, p. 395), someone with partial competence and an interest to learn, rather than an expert. I developed the initial understanding of online participation as an 'acceptable incompetent 'during study 1, but I could only develop a deep and nuanced understanding of the passion behind the participant's online activities in study 2 once I had a higher level of expertise in bodybuilding. Learning from this experience, I devoted more time to the pre-study activities in study 3 to gain a higher level of expertise prior to my fieldwork. Whilst I was still a novice during study 3, I felt more confident in my knowledge and could focus the interviews more on the subtleties of different kinds of passion and the meanings of related online interactions, rather than having to learn about the basic skills necessary for the passion.

While immersing myself into the field was important, I also sought to keep a critical distance for the analysis. First, as a novice in both study settings I started with a more removed perspective than an insider into bodybuilding and photography. Second, as recommended by Coffey (1999), I included my personal feelings and involvement to all field notes and interviews notes in order remain aware of how my personal perspective coloured my observations and interactions in the field. Especially the observations in bodybuilding gyms and at competitions in the first two studies were at times intimidating and stressful. In one competition I witnessed the collapse and resuscitation of a bodybuilder, which illustrates the

breadth of unanticipated events during fieldwork and underscores the importance of social support through supervisors and colleagues. Finally, I left the field for the final phases of the analysis. While I started to analyse the data during the fieldwork in order to discuss my observations and explanations with other study participants, I carried out the final rounds of coding and the write-up away from the field in order to take a more critical and reflective stance.

Limited Number of Available Participants

As outlined in the assumptions underlying my methodology in chapter 3, I sought to work with a small number of participants in depth. I recruited between 8 and 13 participants in each study, yet the findings could have benefited from a larger number of available participants to choose from. A larger pool of potential participants would have allowed me to maintain a narrow scope in my studies and to discuss and check my findings with participants from all groups described in this thesis.

During study 1 and 2 recruitment was difficult due to the rather low numbers of potential participants and my lack of connections to them. Thus, I had to open up my focus to a wider range of locations, which meant I could not interview all participants face-to-face. Furthermore, I interviewed a wide range of bodybuilders, including different kinds of female bodybuilders, which made it more difficult to pin down the meaning of passion in this context.

This also meant that I could not recruit participants from all the groups that I intended to cover, i.e., I could not recruit celebrities during study 2. I sought to mitigate this limitation through participant observation online and offline, secondary data from books and magazines, and discussions of celebrities with other study participants. In hindsight, I would offer a clear incentive for individuals to participate in the study in order to recruit more participants and to spend less time recruiting. Thus, I adjusted my recruitment approach in study 3. I chose a study cohort that had a very narrowly defined passion and was accessible in Melbourne, and I offered them a gift voucher for their participation. The recruitment during study 3 was much faster. I could recruit participants who covered the entire career spectrum from beginners to aspiring artists, and I discussed my observations and interpretations in member checks with all participants.

7.4.3 Limitations of the Applicability of the Findings

The final criterion to evaluate the quality of this research was applicability (Glaser & Strauss, 1967). The findings were grounded in specific settings, but through my study design I aimed to generate an understanding of online participation that applies to different groups of users as well as to different passions and social network sites. I summarised the findings of each study through assertions, and I compared and contrasted them with the findings of each consecutive study to evaluate and to refine the assertions. Furthermore, I contrasted the findings with other studies of similar settings to highlight how this research applies to those findings and to show how it extends previous work or diverts from it.

The findings of this thesis are only applicable to passionate users of passion-centric social network sites. Users who are mere fans or who only casually engage in an activity, rather than in a passionate way, may participate similarly online. However, as discussed in chapter 1, they fall outside the scope of this thesis.

Within the scope of this thesis, the findings may be limited in their applicability due to the choice of cases for the three studies. Both bodybuilding and photography were visual and required interpretation. Furthermore, all study participants were committed users of passion-centric social network sites. The different geographic locations in study 2 and 3 may also have contributed to different views on the development of passion. Finally, the passion-centric social network sites examined in this thesis are constantly changing, and some aspects of the findings may not apply any more to the current state of these websites.

Focus on Activities with a Subjective, Visual Outcome

Both activities studied in this thesis had a visual outcome that can be captured in digital images and presented as an achievement on passion-centric social network sites. While other activities can also be captured as digital images, other modes of representation may better suited to present the essence of achievements. For example, MySpace and Last.fm provide ways to express and discuss passion in the context of music, which may facilitate similar kinds of online participation as described in this thesis. However, some activities may not lend themselves well for self-presentation online. For instance, texts and images online may not appropriately capture the food flavours achieved by passionate cooks or the performance of a football player throughout an entire game. Consequently, their participation in passion-centric social network sites may vary from the findings described in this thesis.

While both passion activities in this thesis had visual outcomes, these outcomes also required interpretation. The achievements of bodybuilders and photographers alike require subjective judgement of peers and experts, and the variations in these judgements stimulate discussions and comments in environments related to the passion. Thus, activities with an outcome that requires subjective interpretation may be well suited for passion-centric social network sites, because they may stimulate more online discussion than activities that can easily be quantified, like the time it takes a runner to complete a marathon or the score of a basketball game. The exploration of passion-centric social network sites for non-visual activities as well as passions with a quantitative outcome constitute opportunities for future research to increase the applicability of the findings generated in this thesis.

Limited to Committed Users

The contributions of this thesis are predominantly based on the accounts and observations of users with a strong commitment to the website. The understanding of online participation presented in this thesis may apply only in parts, possibly for tool-related activities, to users who are new to a passion-centric social network site or who may only be 'readers' (Preece & Shneiderman, 2009). Exploring the practices of novel users, casual users, and individuals who stop using passion-centric social network sites, constitutes a further avenue for future research to increase the applicability of the findings.

Study Location

The findings showed that participation in passion-centric social network sites was closely entwined with offline activities and connections. Thus, the choice of the study location may have further limited the applicability of the findings. First, most participants in this thesis came from urban areas, and their passion as well as their participation in passion-centric social network sites may be different from users in rural areas. Urban areas are more likely to provide a better infrastructure for passion activities, such as gyms or photo shops, than rural areas. Study 2 showed that urban areas can attract a high density of people engaging in a passion, and one of the study participants (Francis) had moved from Europe to Southern California because of his passion for bodybuilding. The differences between urban and rural areas in the proximity between users and the accessibility of resources may also be reflected in online participation, as indicated in related work which indicates differences in social capital on social network sites between rural and urban users (Gilbert et al., 2008). Particularly, the high degree of offline connections with other users of passion-centric social

network sites in study 3 may have been partly a result of the proximity between users in urban areas.

Furthermore, the choice of California for the fieldwork during study 2 may have influenced the understanding of professional activities related to a person's passion. While Southern California is the cultural centre of the bodybuilding world (Hotten, 2004; Klein, 1993), it is also associated with a culture of entrepreneurship and stardom, as embodied by the Hollywood Walk of Fame. Possibly, the professional career ambitions of aspiring celebrities in California are also a reflection of a local culture where entrepreneurship and fame appear to be highly valued. In contrast, the findings of study 1 and study 3 indicated that individuals in other locations may be less inclined to turn a leisure activity into professional work, or they may even reject such a career choice.

Ongoing Changes of Passion-Centric Social Network Sites

The passion-centric social network sites studied in this thesis are constantly evolving. Throughout my fieldwork I kept track of changes in my memos, and I discussed updates and novel features with the study participants. Naturally, the findings of this thesis are limited because both BodySpace and Flickr introduced updates also after I finished my fieldwork. Flickr updated the layout of the photo page with new navigation features, extra space for photos, and the option to view images on a dark background (Nguyen, 2010).

While the changes on Flickr were rather minor, BodySpace introduced a group feature that could address one of the limitations highlighted in this thesis. Groups on BodySpace connect users with shared interests and goals, and they support private discussion forums that are only visible to group members (BodySpaceAdmin, 2009). These private discussion forums may allow people to express themselves more freely without diminishing their public persona on the website. Hence, this feature has the potential to mitigate limitations of online participation, like the lack of critical discussion and constructive feedback (see section 7.3.1), as well as the lack of expressions of sacrifices that people make for their passion (see section 7.3.3).

7.5 Opportunities for Future Research

The limitations of this thesis pointed towards opportunities for future work. Beyond that, future work can explore passion and technologies in related contexts like education, lifestyle changes, and spirituality.

7.5.1 Extending Our Understanding of Passion and Online Participation

Qualitative and Quantitative Studies to Further Broaden the Applicability of the Findings

This thesis generated an understanding of online participation and passion based on studies of two different passion-centric social network sites with different activities and different kinds of connections between users. Conducting further qualitative studies in the future will help to address some of the aforementioned limitations, such as the role of passion-centric social network sites with regards to:

- Different ways of self-expression beyond images and text

- Different study locations, e.g., in rural areas and non-English-speaking countries

- Varying levels of commitment to passion-centric social network sites, like novel users or individuals who have stopped using the website

- The development of engagement in an activity from being a pure fan and casual engagement towards passionate engagement

While further qualitative research will help to illuminate these issues, each case selected for qualitative research will also highlight new limitations and variations. Thus, this thesis also underlines boyd and Ellison's (2007) call for quantitative studies of passion-centric social network sites. Such studies would complement the rich insights from this research with a broad understanding of online participation.

Understanding Passion on Friendship-Driven Social Network Sites and other Web-Based Services

One way to develop this understanding further is to explore how passion and participation in friendship-driven social network sites shape each other. While passion-centric social network

sites are designed to support a particular activity, friendship-driven social network sites like MySpace and Facebook also support groups based on shared activities and interests. Previous research on friendship-driven social network sites showed that the expression of interests and tastes on the profile is important to establish an online identity (Liu, 2007), but this thesis also highlights that passion can complicate the relationships with people in other social spheres, similar to conflicts arising from blurred boundaries between work and private life on social network sites (Binder et al., 2009; Skeels & Grudin, 2009). Future work could explore the opportunities for passion opened up by friendship-driven social network sites as well as the complications that may emerge when passion intersects with other areas like work and personal life online.

In addition to friendship-driven social network sites, the study participants also indicated that their passion permeates other uses of the web, ranging from participation in related discussion forums to the ways they search for information on the web. While online communities emerging from discussions of shared interests on bulletin boards, newsgroups, and discussion forums have received much attention in research (e.g., (Ellis, Oldridge, & Vasconcelos, 2004; Porter, 2004; Preece, 2000; Rheingold, 2000)), the influence of passion on more recent technologies like Twitter and Tumblr, as well as their influence on browsing and searching the web is less well understood. Thus, future work could expand current understanding of the relationship between passion and social network sites by exploring how passion shapes interactions across a wide range of web-based applications, and vice versa, how these interactions support, extend, or complicate passion.

Explore the Risks in Passion and Online Participation

This thesis has outlined both the benefits as well as the risks inherent in passion. Particularly the passion of bodybuilding in study 1 and study 2 highlighted that passion can inherit severe detrimental outcomes for one's health and wellbeing, ranging from social isolation to mental disorders. One way to extend the understanding of passion and social network sites developed in this thesis is to further explore the online practices of individuals who put their health and wellbeing at risk for their passion. This thesis described how participation in passion-centric social network sites complicates passion, because it lacks expressions of failure as well as critical feedback, and the interactions with peers online can reinforce the separation and isolation from the general public. Future work could explore these issues further and investigate how online participation shapes the activities of groups like backyard wrestlers (McBride & Bird, 2007), motorcycle clubs (Hopper & Moore, 1990), graffiti artists

(Halsey & Pederick, 2010), or pro-anorexia groups (Halse, Honey, & Boughtwood, 2008), which encourage risky, illegal, or health-damaging lifestyles.

7.5.2 Apply the Understanding to Passion Beyond Leisure Activities

This thesis has investigated passion primarily from the perspective of serious leisure activities (and its overlap to professional work), but the understanding of passion and social network sites can also contribute to other areas of everyday life. Future work may continue this research by exploring how technologies support passion in the following areas:

- *Education and learning:* Successful teachers are often praised for their passion for students, school, and community, and their skills to instil a similar passion in their students (Day, 2004). Beyond that, Robinson and Aronica (2009) argue that a key purpose of education should be to help students find their 'element'—an activity that combines their true talent and their love for an activity. While this thesis shows how individuals use social network sites to learn and develop skills, future work could explore how social network sites can be used in educational settings to help students explore their interests and to find their element.

- *Community and political engagement:* As highlighted by Stebbins (2007), the unpaid work carried out by volunteers in communities and non-profit organisations shares many similarities with the passion activities described in this thesis, like commitment, sacrifices, and career trajectories through skill and identity development. The 2008 US presidential election illustrated how social media assist in mobilising volunteers and communities in the context of political action. While related work exists on the potentials of social network sites for political engagement (boyd, 2008a; Ellison et al., 2009; Kushin & Kitchener, 2009; Utz, 2009), little is known on how actual political engagement unfolds over time. Beyond that, political engagement is just one of many areas where people volunteer. Future work could explore how passionate volunteers in organisations like the Red Cross, Greenpeace, or Amnesty International use social media to coordinate their work, find support, and to express their achievements.

- *Developing healthier lifestyles:* Changing behaviours, like giving up smoking or starting to exercise regularly, and sustaining such behaviour changes, requires aspirations, commitment, and sacrifices, similar to the passions discussed in this thesis. Previous studies of health interventions on social network sites indicate that

individuals may not want to share their health status with all their Facebook friends (Munson, Lauterbach, Newman, & Resnick, 2010). Thus, social network sites designed for a particular purpose may be a more viable way to encourage healthier lifestyles. While study 1 and study 2 focussed on bodybuilders on BodySpace, future work could explore how other gym users integrate social network sites into their practices, and how their participation augments, and possibly also complicates their lifestyle change.

▪ *Spirituality and faith:* Recent work in HCI has shown a growing interest in spirituality and faith (Bell, 2006; Gaver et al., 2010; Woodruff, Augustin, & Foucault, 2007; Wyche, Hayes, Harvel, & Grinter, 2006). Passion in a Christian context is generally associated with the suffering of Christ and a sense of compassion with other people's sufferings (Solomon, 1993). However, being faithful also shares similarities with being passionate in the context of leisure activities. Faith requires commitment and sacrifices, a belief in shared values of a larger community, and it gives meaning to people's lives. Future work could expand on the understanding of passion and social network sites developed in this thesis by exploring the practices surrounding sites like MyChurch or Salam, which support connections and engagement within spiritual groups.

7.6 Trends in Social Network Sites for Passion

Passion-centric social network sites were a relatively young trend when I started this research. Since 2007 the landscape of social network sites has grown and changed in two complementary ways. Large friendship-driven social network sites have continued to extend their services and have become more pervasive, while passion-centric social network sites and other sites with a specific purpose have addressed a growing number of niche activities. This section looks at recent developments, but both of these trends also provide pointers for future developments in this area.

Over the last three years large friendship-driven social network sites like Facebook have become more pervasive. Groups and fan pages on Facebook increasingly cover community activities similar to the activities on passion-centric social network sites described in the findings of this thesis. Furthermore, Facebook has grown through applications from third parties, partly through social games like Farmville, but also through tools like Nike Running, which connects passionate runners and lets them compete via Facebook. The integration of

Facebook's social graph into other websites and, conversely, the integration of the search engine Bing into Facebook and the introduction of messaging services that connect email, instant messaging, and SMS, show how Facebook further pervades online activities. The growing influence of Facebook was recently underlined by the Time magazine, which named Facebook co-founder Mark Zuckerberg Person of the Year for 2010 (Grossman, 2010). While Facebook has been very successful in English-speaking countries and beyond, other countries have similarly popular and expanding social network sites, like QQ in China and Cyworld in South Korea, which further underscores the increasing pervasiveness of friendship-driven social network sites.

While large social network sites have vastly expanded their services over the last few years, passion-centric social network sites and other sites with more specific purposes have flourished as well. These sites complement friendship-driven social network sites, partly because of privacy concerns arising from multiple overlapping social spheres on Facebook and other sites. For example, Germany considers a law that would ban employers from using Facebook to screen prospective job candidates in order to protect private information (J. Kirk, 2010). At the same time, professional social network sites like LinkedIn and Xing have had continued success, because they allow people to keep professional interactions separate from other areas of their lives.

While LinkedIn existed when I started this research, several new social network sites with specific purposes emerged in the last 3 years. Twitter has established itself as a tool to share news in real time, but it also gets used as a community to chat with friends (Suster, 2010). Tumblr may turn into a contender for Twitter in the area of micro-blogging, although people appear to use it slightly differently. Tumblr appears to get used as a mix of tool and theatre— people both collect and re-post information they find, and they blend in their own writings, photos, and videos. While Tumblr allows people to establish publicly visible connections, it lacks other community functions such as commenting on other people's pages. Furthermore, Foursquare shows the potentials of location-based social networking. It helps people to find their friends and discover new places, but it also serves as a theatre to promote one's activities to friends and to collect badges for visiting places. Beyond Foursquare, the popularity of iPhones and Android phones opens up opportunities for the development of new tools to support passion in situ. For example, Flickr already lists the iPhone as the most popular camera on its website.[24] Finally, Apple's social network site Ping shows how social

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[24] Flickr lists statistics of camera use on http://www.flickr.com/cameras/ and at the time of writing (December 2010) the Apple iPhone 3G is most popular camera amongst Flickr users.

networks can be directly integrated with passion-centric activities like music listening via iTunes. Both the integration of social networking services with other technologies as well as the separation of networks through specialised websites point out trends for the ongoing development of social network sites to support passion.

7.7 Concluding Remarks

This thesis developed an understanding of participation in passion-centric social network sites that contributes to recent trends in technology-mediated communication as well as long-lasting philosophical debates. The recent trend is concerned with the ongoing development of social network sites and their diversification. While large social network sites like Facebook and MySpace seek to diversify their services to broaden their user base, passion-centric social network sites are part of a long tail of smaller social network sites that connect individuals based on their shared interests, career aspirations, cultural backgrounds, or their religious affiliation. The emergence of such niche-social network sites also marks an evolvement in traditional online communities from discussion forums and newsgroups, which focus on interactions on a group level, towards a networked structure that focuses more on the individual. This thesis illustrated how the focus on the individual and his or her personal networks facilitates personal development and self-expression within a community of peers who share a passion.

The understanding of passion also contributes towards a long-lasting debate in philosophy on whether passion enriches or complicates people's lives. This thesis has highlighted that passion does both—it is significant, because it gives meaning to people's lives and provides them with goals that foster personal development, connections with peers, and mutual recognition. At the same time passion also demands sacrifices, and sometimes people take enormous risks to achieve their goals. As stated in the introduction, the most confronting incident during my research was when I witnessed the collapse of a bodybuilder, his resuscitation, and later via an online discussion forum, his death. As pointed out by other people on the discussion forum, such tragic events are not limited to bodybuilding, but can happen in other activities like marathon running or climbing—even some photographers put their lives at risk.

This thesis has shown that passion-centric social network sites support people in achieving their goals, but they are limited in mitigating their sacrifices, and in some areas online participation appears to exacerbate the risks that people take. This discrepancy is important,

because it asks HCI researchers and practitioners to design and to study technologies that do not only assist people in achieving their goals, but also to envision ways to address the challenges associated with passion. Future technologies need to help people assess the risks they take. They need to foster connections beyond the boundaries of passion-centric communities to support the exchange of information and new ideas with others and to foster mutual respect and recognition. Finally, technologies need to provide an environment where people can express their concerns, failures, and criticisms, in order to foster reflexivity, learning, and mutual support. Addressing these issues with a holistic view of how passion enriches and complicates people's lives is crucial, because technology and passion shape each other and affect fundamental aspects of being human—how we spend our time and energy, how we feel about ourselves, and how we relate to others.

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References

Aguiton, C., Cardon, D., Castelain, A., Fremaux, P., Girard, H., Granjon, F., et al. (2009). Does showing off help to make friends? Experimenting a sociological game on self-exhibition and social networks. *International AAAI Conference on Weblogs and Social Media* Retrieved March 11, 2010, from http://www.aaai.org/ocs/index.php/ICWSM/09/paper/view/178

Ahern, S., Eckles, D., Good, N. S., King, S., Naaman, M., & Nair, R. (2007). Over-exposed?: Privacy patterns and considerations in online and mobile photo sharing. In *Proceedings of the Conference on Human Factors in Computing (CHI 2007)* (pp. 357-366). New York: ACM.

Alaszewski, A. (2006). *Using diaries for social research*. London: Sage.

Allan, G. (1989). *Friendship: Developing a sociological perspective*. New York: Harvester Wheatsheaf.

Ames, M., & Naaman, M. (2007). Why we tag: Motivations for annotation in mobile and online media. In *Proceedings of the Conference on Human Factors in Computing (CHI 2007)* (pp. 971-980). New York: ACM.

Amichai-Hamburger, Y. (2007). Personality, individual differences and Internet use. In A. N. Joinson, K. Y. A. McKenna, T. Postmes & U.-D. Reips (Eds.), *The Oxford handbook of Internet psychology* (pp. 187-204). Oxford, UK: Oxford University Press.

Anderson, R. (1994). Representations and requirements: The value of ethnography in system design. *Human-Computer Interaction, 9*(2), 151-182.

Armstrong, D., Gosling, A., Weinman, J., & Marteau, T. (1997). The place of inter-rater reliability in qualitative research: An empirical study. *Sociology, 31*(3), 597-606.

Ashkanasy, S., Vetere, F., Davis, H., & Shanks, G. (2009). Finding the other 5%: Understanding the role of social networking technologies in building personal networks for young adults with cancer. In *Proceedings of the European Conference on Computer Supported Cooperative Work (ECSCW 2009)* (pp. 105-122). London: Springer.

Bailey, C. A. (2007). *A guide to qualitative field research* (2nd ed.). Thousand Oaks, CA: Pine Forge Press.

Bannon, L. J. (2006). Forgetting as a feature, not a bug: The duality of memory and implications for ubiquitous computing. *CoDesign, 2*(1), 3-15.

Bardzell, J. (2007). Creativity in amateur multimedia: Popular culture, critical theory, and HCI. *Human Technology, 3*(1), 12-33.

Barkhuus, L., & Tashiro, J. (2010). Student socialization in the age of Facebook. In *Proceedings of the Conference on Human Factors in Computing (CHI 2010)* (pp. 133-142). New York: ACM.

Baym, N. K. (2007). The new shape of online community: The example of Swedish independent music fandom *First Monday, 12*(8), http://firstmonday.org/issues/issue12_18/baym/index.html.

Baym, N. K., & Markham, A. N. (2009). What constitutes quality in qualitative Internet research? In A. N. Markham & N. K. Baym (Eds.), *Internet inquiry: Conversations about method* (pp. 274-310). Los Angeles, CA: Sage.

Bazeley, P. (2007). *Qualitative data analysis with NVivo*. London: Sage.

BBC (Writer/Director) (1983). Master photographers [Documentary]. UK: BBC.

BBC (Writer/Director) (2007). The genius of photography [Documentary]. UK: BBC.

Beer, D. (2008a). Making friends with Jarvis Cocker: Music culture in the context of web 2.0. *Cultural Sociology, 2*(2), 222-241.

Beer, D. (2008b). Social network(ing) sites…revisiting the story so far: A response to danah boyd & Nicole Ellison. *Journal of Computer-Mediated Communication, 13*(2), 516-529.

Bell, G. (2006). No more SMS from Jesus: Ubicomp, religion and techno-spiritual practices. In *Proceedings of the Conference on Ubiquitous Computing (UbiComp 2006)* (pp. 141-158). Berlin: Springer.

Benevenuto, F., Rodrigues, T., Almeida, V., Almeida, J., & Ross, K. (2009). Video interactions in online video social networks. *ACM Transactions on Multimedia Computing, Communications, and Applications (TOMCCAP), 5*(4), 1-25.

Binder, J., Howes, A., & Sutcliffe, A. (2009). The problem of conflicting social spheres: Effects of network structure on experienced tension in social network sites. In *Proceedings of the Conference on Human Factors in Computing (CHI 2009)* (pp. 965-974). New York: ACM.

Birks, M., Chapman, Y., & Francis, K. (2008). Memoing in qualitative research: Probing data and processes. *Journal of Research in Nursing, 13*(1), 68-75.

Blythe, M., & Cairns, P. (2009). Critical methods and user generated content: The iPhone on YouTube. In *Proceedings of the Conference on Human Factors in Computing (CHI 2009)* (pp. 1467-1476). New York: ACM.

Boase, J., & Wellman, B. (2006). Personal relationships: On and off the Internet. In A. Vangelisti & D. Perlman (Eds.), *Cambridge handbook of personal relationships* (pp. 709-723). Cambridge, UK: Cambridge University Press.

BodySpaceAdmin. (2009). New: BodyGroup private forums! *BodySpaceAdmin's BodyBlog*. Retrieved December 21, 2010, from http://blog.bodybuilding.com/BodySpaceAdmin/2009/05/26/new_bodygroup_private_forums/

Boehner, K., Vertesi, J., Sengers, P., & Dourish, P. (2007). How HCI interprets the probes. In *Proceedings of the Conference on Human Factors in Computing (CHI 2007)* (pp. 1077-1086). New York: ACM.

Boellstorff, T. (2008). *Coming of age in Second Life: An anthropologist explores the virtually human*. Princeton, NJ: Princeton University Press.

Bogdan, C., & Bowers, J. (2007). Tuning in: Challenging design for communities through a field study of radio amateurs. In *Proceedings of the Communities and Technologies Conference (C&T 2007)* (pp. 439-461). London: Springer.

Bogdan, C., & Mayer, R. (2009). Makumba: The role of the technology for the sustainability of amateur programming practice and community. In *Proceedings of the Communities and Technologies Conference (C&T 2009)* (pp. 205-214). New York: ACM.

Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology, 54*(1), 579-616.

Bowen, G. A. (2006). Grounded theory and sensitizing concepts. *International Journal of Qualitative Methods, 5*(3), 1-9.

boyd, d. (2004). Friendster and publicly articulated social networking. In *Extended Abstracts of the Conference on Human Factors in Computing (CHI 2004)* (pp. 1279-1282). New York: ACM.

boyd, d. (2007). *Choose your own ethnography: In search of (un)mediated life*. Paper presented at the Society for Social Studies of Science (4S) Annual Conference. Retrieved October 27, 2007, from http://www.danah.org/papers/talks/4S2007.html

boyd, d. (2008a). Can social networking sites enable political action? In A. Fine, M. L. Sifry, A. Rasiej & J. Levy (Eds.), *Rebooting America: Ideas for redesigning American democracy for the Internet age*. San Francisco, CA: Personal Democracy Press.

boyd, d. (2008b). *Taken out of context: American teen sociality in networked publics.* Unpublished Dissertation, University of California, Berkeley, Berkeley, CA.

boyd, d. (2008c). Why youth (heart) social network sites: The role of networked publics in teenage social life. In D. Buckingham (Ed.), *Youth, identity, and digital media* (pp. 119-142). Cambridge, MA: MIT Press.

boyd, d., & Ellison, N. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210-230.

boyd, d., & Hargittai, E. (2010). Facebook privacy settings: Who cares? *First Monday, 15*(8), http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/3086/2589.

Bringer, J. D., Johnston, L. H., & Brackenridge, C. H. (2004). Maximizing transparency in a doctoral thesis: The complexities of writing about the use of QSR*NVivo within a grounded theory study. *Qualitative Research, 4*(2), 247-265.

Brzozowski, M. J., Hogg, T., & Szabo, G. (2008). Friends and foes: Ideological social networking. In *Proceedings of the Conference on Human Factors in Computing (CHI 2008)* (pp. 817-820). New York: ACM.

Buffardi, L., & Campbell, W. (2008). Narcissism and social networking web sites. *Personality and Social Psychology Bulletin, 34*(10), 1303-1314.

Butler, G., & Fiore, R. (Writer/Director), G. Butler & J. Gary (Producer) (1977). Pumping iron [Documentary]. USA: Seven Keys Video.

Cardon, M. S. (2008). Is passion contagious? The transference of entrepreneurial passion to employees. *Human Resource Management Review, 18*(2), 77-86.

Carter, D. M. (2004). Living in virtual communities: Making friends online. *Journal of Urban Technology, 11*(3), 109-125.

Carter, S., & Mankoff, J. (2005). When participants do the capturing: The role of media in diary studies. In *Proceedings of the Conference on Human Factors in Computing (CHI 2005)* (pp. 899-908). New York: ACM.

Chalfen, R. (1987). *Snapshot versions of life*. Bowling Green, OH: Bowling Green State University Popular Press.

Cherubini, M., Oliveira, R. d., & Oliver, N. (2009). Understanding near-duplicate videos: A user-centric approach. In *Proceedings of the Conference on Multimedia (MM 2009)* (pp. 35-44). New York: ACM.

Cho, J., & Trent, A. (2006). Validity in qualitative research revisited. *Qualitative Research, 6*(3), 319-340.

Cobley, P., & Haeffner, N. (2009). Digital cameras and domestic photography: Communication, agency and structure. *Visual Communication, 8*(2), 123.

Coffey, A. (1999). *The ethnographic self: Fieldwork and the representation of identity*. London: Sage.

Coleman, J. S. (1988). Organizations and institutions: Sociological and economic approaches to the analysis of social structure. *The American Journal of Sociology, 94 (Supplement)*, S95-S120.

Comber, R. (2009). Friendship online: Users' experiences of relationships in social networks. In *Proceedings of the European Conference on Cognitive Ergonomics (ECCE 2009)*.

Cook, E., Teasley, S. D., & Ackerman, M. S. (2009). Contribution, commercialization & audience: Understanding participation in an online creative community. In *Proceedings of the Conference on Supporting Group Work (GROUP 2009)* (pp. 41-50). New York: ACM.

Corbin, J. M., & Strauss, A. L. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Los Angeles, CA: Sage.

Cox, A. (2008). Flickr: A case study of web 2.0. *Aslib Proceedings: New Information Perspectives, 60*(5), 493-516.

Crabtree, A., Rodden, T., Tolmie, P., & Button, G. (2009). Ethnography considered harmful. In *Proceedings of the Conference on Human Factors in Computing (CHI 2009)* (pp. 879-888). New York: ACM.

Crossley, N. (2006). In the gym: Motives, meaning and moral careers. *Body Society, 12*(3), 23-50.

Crotty, M. (1998). *Foundations of social research: Meaning and perspective in the research process*. London: Sage.

Cumbo, L. (Writer/Director) (2003). Search for the Afghan girl [Documentary]. USA: National Geographic Television

Day, C. (2004). The passion of successful leadership. *School Leadership & Management: Formerly School Organisation, 24*(4), 425-437.

DiMicco, J. M., & Millen, D. R. (2007). Identity management: Multiple presentations of self in Facebook. In *Proceedings of the Conference on Supporting Group Work (GROUP 2007)* (pp. 383-386). New York: ACM.

DiMicco, J. M., Millen, D. R., Geyer, W., Dugan, C., Brownholtz, B., & Muller, M. (2008). Motivations for social networking at work. In *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2008)* (pp. 711-720). New York: ACM.

Donath, J. (2007). Signals in social supernets. *Journal of Computer-Mediated Communication, 13*(1), 231-251.

Donath, J., & boyd, d. (2004). Public displays of connection. *BT Technology Journal, 22*(4), 71-82.

Dourish, P. (2006). Implications for design. In *Proceedings of the Conference on Human Factors in Computing (CHI 2006)* (pp. 541-550). New York: ACM.

Ducheneaut, N., Moore, R., & Nickell, E. (2007). Virtual "third places": A case study of sociability in massively multiplayer games. *Computer Supported Cooperative Work (CSCW), 16*(1), 129-166.

Dufon, M. A. (2002). Video recording in ethnographic SLA research: Some issues of validity in data collection. *Language, Learning & Technology, 6*(1), 40-59.

Ellis, D., Oldridge, R., & Vasconcelos, A. (2004). Community and virtual community. *Annual Review of Information Science and Technology, 38*(1), 145-186.

Ellison, N., Heino, R., & Gibbs, J. (2006). Managing impressions online: Self-presentation processes in the online dating environment. *Journal of Computer-Mediated Communication, 11*(2), 415-441.

Ellison, N., Lampe, C., & Steinfield, C. (2009). Social network sites and society: Current trends and future possibilities. *Interactions, 16*(1), 6-9.

Ellison, N., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143-1168.

Emerson, R. M., Fretz, R. I., Shaw, L. L., & Thompson, I. (1996). *Writing ethnographic fieldnotes*. Chicago: University of Chicago Press.

Emmett, A. (2008). Networking news: Traditional news outlets turn to social networking web sites in an effort to build their online audiences. *American Journalism Review, 30*(6), 40-44.

Epstein, I., Stevens, B., McKeever, P., & Baruchel, S. (2006). Photo elicitation interview (PEI): Using photos to elicit children's perspectives. *International Journal of Qualitative Methods, 5*(3), 1-9.

Ess, C., & AoIR ethics working committee. (2002). Ethical decision-making and Internet research: Recommendations from the AoIR ethics working committee. *Association of Internet Researchers (AoIR)*. Retrieved February 9, 2010, from http://www.aoir.org/reports/ethics.pdf

Farnham, S. D., Brown, P. T., & Schwartz, J. L. K. (2009). Leveraging social software for social networking and community development at events. In *Proceedings of the*

Communities and Technologies Conference (C&T 2009) (pp. 235-244). New York: ACM.

Faulkner, S., & Melican, J. (2007). Getting noticed, showing-off, being overheard: Amateurs, authors and artists inventing and reinventing themselves in online communities. In *Proceedings of Ethnographic Praxis in Industry Conference* (pp. 51-65). Copenhagen, DK: Blackwell.

Fogg, B. (2002). *Persuasive technology: Using computers to change what we think and do*. San Francisco, CA: Morgan Kaufmann.

Fogg, B., & Eckles, D. (2007). The behavior chain for online participation: How successful web services structure persuasion. In *Proceedings of the Conference on Persuasive Technology (PERSUASIVE 2007)* (pp. 199-209). Berlin: Springer.

Forsythe, D. E. (1999). "It's just a matter of common sense": Ethnography as invisible work. *Computer Supported Cooperative Work (CSCW), 8*(1), 127-145.

Fuchs, C. (2010). studiVZ: Social networking in the surveillance society. *Ethics and Information Technology, 12*(2), 171-185.

Fussell, S. (1991). *Muscle: Confessions of an unlikely bodybuilder*. London: Cardinal.

Gaver, W., Blythe, M., Boucher, A., Jarvis, N., Bowers, J., & Wright, P. (2010). The prayer companion: Openness and specificity, materiality and spirituality. In *Proceedings of the Conference on Human Factors in Computing (CHI 2010)* (pp. 2055-2064). New York: ACM.

Gaver, W., Dunne, A., & Pacenti, E. (1999). Cultural probes. *Interactions, 6*(1), 21-29.

Gilbert, E., & Karahalios, K. (2009). Predicting tie strength with social media. In *Proceedings of the Conference on Human Factors in Computing (CHI 2009)* (pp. 211-220). New York: ACM.

Gilbert, E., Karahalios, K., & Sandvig, C. (2008). The network in the garden: An empirical analysis of social media in rural life. In *Proceedings of the Conference on Human Factors in Computing (CHI 2008)* (pp. 1603-1612). New York: ACM.

Glaser, B. G. (1978). *Advances in the methodology of grounded theory: Theoretical sensitivity*. Mill Valley, CA: Sociology Press.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago, IL: Aldine.

Gobo, G. (2008). *Doing ethnography*. Los Angeles, CA: Sage.

Goffman, E. (1959). *The presentation of self in everyday life*. Garden City, NY: Doubleday.

Golbeck, J. (2009). On the Internet, everybody knows you're a dog: The human-pet relationship in online social networks. In *Extended Abstracts of the Conference on Human Factors in Computing (CHI 2009)* (pp. 4495-4500). New York: ACM.

Golder, S. A., Wilkinson, D. M., & Huberman, B. A. (2007). Rhythms of social interaction: Messaging within a massive online network. In *Proceedings of the Communities and Technologies Conference (C&T 2007)* (pp. 41-66). London: Springer.

Goodings, L., Locke, A., & Brown, S. D. (2007). Social networking technology: Place and identity in mediated communities. *Journal of Community & Applied Social Psychology, 17*(6), 463-476.

Graham, C., Rouncefield, M., Gibbs, M., Vetere, F., & Cheverst, K. (2007). How probes work. In *Proceedings of the Australasian Conference on Computer-Human Interaction (OZCHI 2007)* (pp. 29-37). New York: ACM.

Granovetter, M. S. (1973). The strength of weak ties. *The American Journal of Sociology, 78*(6), 1360-1380.

Granovetter, M. S. (1983). The strength of weak ties: A network theory revisited. *Sociological Theory, 1*(1), 201-233.

Grinter, R. E. (2005). Words about images: Coordinating community in amateur photography. *Computer Supported Cooperative Work (CSCW), 14*(2), 161-188.

Gross, R., Acquisti, A., & Heinz, H. J. (2005). Information revelation and privacy in online social networks. In *Proceedings of the Workshop On Privacy In The Electronic Society (WPES 2005)* (pp. 71-80). New York: ACM.

Grossman, L. (2010). Person of the year 2010: Mark Zuckerberg. *Time*. Retrieved December 17, 2010, from http://www.time.com/time/specials/packages/article/0,28804,2036683_2037183_2037185-1,00.html

Halse, C., Honey, A., & Boughtwood, D. (2008). *Inside anorexia: The experiences of girls and their families*. London: Jessica Kingsley Publishers.

Halsey, M., & Pederick, B. (2010). The game of fame: Mural, graffiti, erasure. *City: Analysis of Urban Trends, Culture, Theory, Policy, Action, 14*(1), 82-98.

Hammersley, M. (2003). Conversation analysis and discourse analysis: Methods or paradigms? *Discourse & Society, 14*(6), 751-781.

Hammersley, M. (2010). Reproducing or constructing? Some questions about transcription in social research. *Qualitative Research, 10*(5), 553-569.

Hammersley, M., & Atkinson, P. (2007). *Ethnography: Principles in practice* (3rd ed.). London: Routledge.

Harley, D., & Fitzpatrick, G. (2009). YouTube and intergenerational communication: The case of Geriatric1927. *Universal Access in the Information Society, 8*(1), 5-20.

Harper, D. (2002). Talking about pictures: A case for photo elicitation. *Visual Studies, 17*(1), 13-26.

Harper, M., Li, X., Chen, Y., & Konstan, J. (2007). Social comparisons to motivate contributions to an online community. In *Proceedings of the Conference on Persuasive Technology (PERSUASIVE 2007)* (pp. 148-159). Berlin: Springer.

Harrison, S., Tatar, D., & Sengers, P. (2007). The three paradigms of HCI. *Proceedings of alt.chi, Session at the Conference on Human Factors in Computing (alt.chi 2007)* Retrieved October 10, 2010, from http://www.viktoria.se/altchi/index.php?action=showsubmission&id=49

Heath, C., & Hindmarsh, J. (2002). Analysing interaction: Video, ethnography and situated conduct. In T. May (Ed.), *Qualitative research in action* (pp. 99-121). London: Sage.

Heath, C., Hindmarsh, J., & Luff, P. (2010). *Video in qualitative research*. London: Sage.

Hecht, B. J., & Gergle, D. (2010). On the "localness" of user-generated content. In *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2010)* (pp. 229-232). New York: ACM.

Hewson, C. (2007). Gathering data on the Internet: Qualitative approaches and possibilities for mixed methods research. In A. N. Joinson, K. Y. A. McKenna, T. Postmes & U.-D. Reips (Eds.), *The Oxford handbook of Internet psychology* (pp. 405-428). Oxford, UK: Oxford University Press.

Hidi, S., & Renninger, K. A. (2006). The four-phase model of interest development. *Educational Psychologist, 41*(2), 111-127.

Hine, C. (2000). *Virtual ethnography*. London: Sage.

Hjorth, L. (2007). Home and away: A case study of the use of Cyworld mini-hompy by Korean students studying in Australia. *Asian Studies Review, 31*(4), 397-407.

Hochheiser, H., & Shneiderman, B. (2010). From bowling alone to tweeting together: Technology-mediated social participation. *Interactions, 17*(2), 64-67.

Hookway, N. (2008). `Entering the blogosphere': Some strategies for using blogs in social research. *Qualitative Research, 8*(1), 91-113.

Hopper, C., & Moore, J. (1990). Women in outlaw motorcycle gangs. *Journal of Contemporary Ethnography, 18*(4), 363.

Hotten, J. (2004). *Muscle: A writer's trip through a sport with no boundaries*. London: Yellow Jersey Press.

Humphreys, L. (2007). Mobile social networks and social practice: A case study of Dodgeball. *Journal of Computer-Mediated Communication, 13*(1), 341-360.

Humphreys, S. (2008). The challenges of intellectual property for users of social networking sites: A case study of Ravelry. In *Proceedings of the Conference on Entertainment and Media in the Ubiquitous Era (MindTrek 2008)* (pp. 125-130). New York: ACM.

Hutchinson, H., Mackay, W., Westerlund, B., Bederson, B. B., Druin, A., Plaisant, C., et al. (2003). Technology probes: Inspiring design for and with families. In *Proceedings of the Conference on Human Factors in Computing (CHI 2003)* (pp. 17-24). New York: ACM.

IBM. (2011). Projects: SocialBlue. *IBM Center for Social Software.* Retrieved January 20, 2011, from http://www.research.ibm.com/social/projects_socialblue.html

Ito, M., Baumer, S., Bittanti, M., boyd, d., Cody, R., Herr-Stephenson, B., et al. (2009). *Hanging out, messing around, and geeking out: Kids living and learning with new media*. Cambridge, MA: MIT Press.

Joinson, A. N. (2008). Looking at, looking up or keeping up with people?: Motives and use of Facebook. In *Proceedings of the Conference on Human Factors in Computing (CHI 2008)* (pp. 1027-1036). New York: ACM.

Joinson, A. N., & Paine, C. B. (2007). Self-disclosure, privacy and the Internet. In A. N. Joinson, K. Y. A. McKenna, T. Postmes & U.-D. Reips (Eds.), *The Oxford handbook of Internet psychology* (pp. 237-252). Oxford, UK: Oxford University Press.

Jones, C. M., & Baldwin, C. (2009). Using emotion eliciting photographs to inspire awareness and attitudinal change: A user-centered case study. In *Proceedings of the Australasian Conference on Computer-Human Interaction (OZCHI 2009)* (pp. 201-207). New York: ACM.

Kawulich, B. B. (2005). Participant observation as a data collection method. *Forum Qualitative Social Research, 6*(2), http://www.qualitative-research.net/fqs-texte/2-05/05-02-43-e.htm.

Keane, H. (2005). Diagnosing the male steroid user: Drug use, body image and disordered masculinity. *health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine, 9*(2), 189-208.

Keats, P. A. (2009). Multiple text analysis in narrative research: Visual, written, and spoken stories of experience. *Qualitative Research, 9*(2), 181-195.

Khaled, R., Barr, P., Noble, J., & Biddle, R. (2006). Investigating social software as persuasive technology. In *Proceedings of the Conference on Persuasive Technology (PERSUASIVE 2006)* (pp. 104-107). Berlin: Springer.

Kim, K.-H., & Yun, H. (2007). Cying for me, cying for us: Relational dialectics in a Korean social network site. *Journal of Computer-Mediated Communication, 13*(1), 298-318.

Kirk, D., Sellen, A., Harper, R., & Wood, K. (2007). Understanding videowork. In *Proceedings of the Conference on Human Factors in Computing (CHI 2007)* (pp. 61-70). New York: ACM.

Kirk, D., Sellen, A., Rother, C., & Wood, K. (2006). Understanding photowork. In *Proceedings of the Conference on Human Factors in Computing (CHI 2006)* (pp. 761-770). New York: ACM.

Kirk, J. (2010). Germany considers ban on using Facebook for hiring. *Reuters.* Retrieved December 17, 2010, from http://www.reuters.com/article/idUS338070983320100826

Klein, A. M. (1986). Pumping irony: Crisis and contradiction in bodybuilding subculture. *Society of Sport Journal, 3*, 112-133.

Klein, A. M. (1993). *Little big men: Bodybuilding subculture and gender construction*. Albany, NY: State University of New York Press.

Kozinets, R. V. (2002). The field behind the screen: Using netnography for marketing research in online communities. *Journal of Marketing Research, 39*(1), 61-72.

Krasnova, H., Günther, O., Spiekermann, S., & Koroleva, K. (2009). Privacy concerns and identity in online social networks. *Identity in the Information Society, 2*(1), 39-63.

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. Thousand Oaks, CA: Sage.

Kruitbosch, G., & Nack, F. (2008). Broadcast yourself on YouTube: Really? In *Proceedings of the ACM international workshop on Human-centered computing (HCC 2008)* (pp. 7-10). New York: ACM.

Kushin, M., & Kitchener, K. (2009). Getting political on social network sites: Exploring online political discourse on Facebook. *First Monday, 14*(11), http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2645/2350.

Lampe, C., & Ellison, N. (2010). Student athletes on Facebook. In *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2010)* (pp. 193-196). New York: ACM.

Lampe, C., Ellison, N., & Steinfield, C. (2006). A face(book) in the crowd: Social searching vs. social browsing. In *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2006)* (pp. 167-170). New York: ACM.

Lampe, C., Ellison, N., & Steinfield, C. (2008). Changes in use and perception of Facebook. In *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2008)* (pp. 721-730). New York: ACM.

Lampe, C., Wash, R., Velasquez, A., & Ozkaya, E. (2010). Motivations to participate in online communities. In *Proceedings of the Conference on Human Factors in Computing (CHI 2010)* (pp. 1927-1936). New York: ACM.

Lampinen, A., Tamminen, S., & Oulasvirta, A. (2009). "All my people right here, right now": Management of group co-presence on a social networking site. In *Proceedings of the Conference on Supporting Group Work (GROUP 2009)* (pp. 281-290). New York: ACM.

Lange, P. G. (2007a). Publicly private and privately public: Social networking on YouTube. *Journal of Computer-Mediated Communication, 13*(1), 361-380.

Lange, P. G. (2007b). Searching for the 'you' in 'YouTube': An analysis of online response ability. In *Proceedings of Ethnographic Praxis in Industry Conference* (pp. 36-50). Copenhagen, DK: Blackwell

Langer, R., & Beckmann, S. C. (2005). Sensitive research topics: Netnography revisited. *Qualitative Market Research: An International Journal, 8*(2), 189-203.

Langford, M., & Bilissi, E. (2008). *Langford's advanced photography* (7th ed.). Oxford: Focal Press.

Langford, M., Fox, A., & Smith, R. S. (2007). *Langford's basic photography* (8th ed.). Oxford: Focal Press.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.

Lazarus, R. S., & Lazarus, B. N. (1994). *Passion and reason: Making sense of our emotions*. New York: Oxford University Press.

Lessig, L. (2009). *Remix: Making art and commerce thrive in the hybrid economy*. New York: Penguin.

Lindley, S. E., Durrant, A., Kirk, D., & Taylor, A. S. (2009). Collocated social practices surrounding photos. *International Journal of Human-Computer Studies, 67*(12), 995-1004.

Ling, K., Beenen, G., Ludford, P., Wang, X., Chang, K., Li, X., et al. (2005). Using social psychology to motivate contributions to online communities. *Journal of Computer-Mediated Communication, 10*(4), http://jcmc.indiana.edu/vol10/issue14/ling.html.

Liu, H. (2007). Social network profiles as taste performances. *Journal of Computer-Mediated Communication, 13*(1), 252-275.

Livingstone, S. (2008). Taking risky opportunities in youthful content creation: Teenagers' use of social networking sites for intimacy, privacy and self-expression. *New Media Society, 10*(3), 393-411.

Ljungblad, S. (2007). Designing for new photographic experiences: How the lomographic practice informed context photography. In *Proceedings of the Conference on Designing Pleasurable Products and Interfaces (DPPI 2007)* (pp. 357-374). New York: ACM.

Lowe, M. (1998). *Women of steel: Female body builders and the struggle for self-definition*. New York: New York University Press.

MacManus, R. (2010). Facebook profile pages becoming irrelevant. *ReadWriteWeb*. Retrieved October 3, 2010, from http://www.readwriteweb.com/archives/facebook_profile_pages_becoming_irrelevant.php

Mageau, G. A., Vallerand, R. J., Charest, J., Salvy, S.-J., Lacaille, N., Bouffard, T., et al. (2009). On the development of harmonious and obsessive passion: The role of autonomy support, activity specialization, and identification with the activity. *Journal of Personality, 77*(3), 601-646.

Maloney-Krichmar, D., & Preece, J. (2005). A multilevel analysis of sociability, usability, and community dynamics in an online health community. *ACM Transactions on Computer-Human Interaction, 12*(2), 201-232.

Markham, A. N. (2005). The methods, politics, and ethics of representation in online ethnography. In N. K. Denzin & Y. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 793-820). Thousand Oaks, CA: Sage.

McBride, L. B., & Bird, S. E. (2007). From smart fan to backyard wrestler: Ritual, performance, and pain. In J. Gray, C. Sandvoss & C. L. Harrington (Eds.), *Fandom: Identities and communities in a mediated world* (pp. 165-176). New York: New York University Press.

McMillan, S. J. (2000). The microscope and the moving target: The challenge of applying content analysis to the world wide web. *Journalism and Mass Communication Quarterly, 77*(1), 80-98.

Meyer, M., & Barsky, R. (2000). *Philosophy and the passions: Toward a history of human nature*. University Park, PA: Pennsylvania State University Press.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.

Miller, A. D., & Edwards, W. K. (2007). Give and take: A study of consumer photo-sharing culture and practice. In *Proceedings of the Conference on Human Factors in Computing (CHI 2007)* (pp. 347-356). New York: ACM.

Miller, D., & Slater, D. (2000). *The Internet: An ethnographic approach*. Oxford, UK: Berg.

Monaghan, L. F. (2001). *Bodybuilding, drugs, and risk*. New York: Routledge.

Moran-Ellis, J., Alexander, V. D., Cronin, A., Dickinson, M., Fielding, J., Sleney, J., et al. (2006). Triangulation and integration: Processes, claims and implications. *Qualitative Research, 6*(1), 45-59.

Morris, M. R., Teevan, J., & Panovich, K. (2010). What do people ask their social networks, and why? A survey study of status message Q&A behavior. In *Proceedings of the Conference on Human Factors in Computing (CHI 2010)* (pp. 1739-1748). New York: ACM.

Munson, S., Lauterbach, D., Newman, M., & Resnick, P. (2010). Happier together: Integrating a wellness application into a social network site. In *Proceedings of the Conference on Persuasive Technology (PERSUASIVE 2010)* (pp. 27-39). Berlin: Springer.

Murthy, D. (2008). Digital ethnography: An examination of the use of new technologies for social research. *Sociology, 42*(5), 837-855.

NABBA. (2009). NABBA Rules. *National Amateur Body-Builders' Association*. Retrieved January 7, 2010, from http://www.nabba.co.uk/aboutus/rules.html

Negoescu, R. A., & Gatica-Perez, D. (2008). Analyzing Flickr groups. In *Proceedings of the Conference on Content-based Image and Video Retrieval (CIVR 2008)* (pp. 417-426). New York: ACM.

Neuman, W. L. (2006). *Social research methods: Qualitative and quantitative approaches* (6th ed.). Boston, MA: Allyn and Bacon.

Nguyen, J. (2010). A new photo experience: Your photos, happier. *Flickr Blog.* Retrieved December 21, 2010, from http://blog.flickr.net/en/2010/06/23/a-new-photo-experience-your-photos-happier/

Nov, O., Naaman, M., & Ye, C. (2010). Analysis of participation in an online photo-sharing community: A multidimensional perspective. *Journal of the American Society for Information Science and Technology, 61*(3), 555-566.

Nyland, R., & Near, C. (2007). Jesus is my friend: Religiosity as a mediating factor in Internet social networking use. *Paper presented at AEJMC Midwinter Conference, Reno, NV, February 23-24.*

Oldenburg, R. (1989). *The great good place: Cafes, coffee shops, community centers, beauty parlors, general stores, bars, hangouts, and how they get you through the day*. New York: Paragon Books.

Panciera, K., Priedhorsky, R., Erickson, T., & Terveen, L. (2010). Lurking? Cyclopaths? A quantitative lifecycle analysis of user behavior in a geowiki. In *Proceedings of the Conference on Human Factors in Computing (CHI 2010)* (pp. 1917-1926). New York: ACM.

Park, N., Kee, K. F., & Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, uses and gratifications, and social outcomes. *CyberPsychology & Behavior, 12*(6), 729-733.

Passion. (2010). Oxford English Dictionary Online. Retrieved December 19, 2010, from http://www.oed.com/view/Entry/138504

Pearson, E. (2009). All the world wide web's a stage: The performance of identity in online social networks. *First Monday, 14*(3), http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/viewArticle/2162/2127.

Pfeil, U., & Zaphiris, P. (2007). Patterns of empathy in online communication. In *Proceedings of the Conference on Human Factors in Computing (CHI 2007)* (pp. 919-928). New York: ACM.

Pink, S. (2007). *Doing visual ethnography: Images, media and representation in research* (2nd ed.). London: Sage.

Porter, C. E. (2004). A typology of virtual communities: A multi-disciplinary foundation for future research. *Journal of Computer-Mediated Communication, 10*(1), http://jcmc.indiana.edu/vol10/issue11/porter.html.

Preece, J. (2000). *Online communities: Designing usability, supporting sociability*. New York: John Wiley.

Preece, J., & Ghozati, K. (2001). Experiencing empathy online. In R. R. Rice & J. E. Katz (Eds.), *The Internet and health communication: Experience and expectations* (pp. 237-260). Thousand Oaks, CA: Sage.

Preece, J., & Maloney-Krichmar, D. (2003). Online communities: Focusing on sociability and usability. In J. Jacko & A. Sears (Eds.), *Handbook of human-computer interaction* (pp. 596-620). Mahwah, NJ: Lawrence Erlbaum.

Preece, J., Nonnecke, B., & Andrews, D. (2004). The top five reasons for lurking: Improving community experiences for everyone. *Computers in Human Behavior, 20*(2), 201-223.

Preece, J., & Shneiderman, B. (2009). The reader-to-leader framework: Motivating technology-mediated social participation. *AIS Transactions on Human-Computer Interaction, 1*(1), 13-32.

Probert, A. (2007). The fine line: An insight into 'risky' practices of male and female competitive bodybuilders. *Annals of Leisure Research, 9*(3-4), 272-290.

Pultar, E., & Raubal, M. (2009). A case for space: Physical and virtual location requirements in the CouchSurfing social network. In *Proceedings of the 2009 International Workshop on Location Based Social Networks* (pp. 88-91). New York: ACM.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.

Raijmakers, B., Gaver, W. W., & Bishay, J. (2006). Design documentaries: Inspiring design research through documentary film. In *Proceedings of the Conference on Designing Interactive Systems (DIS 2006)* (pp. 229-238). New York: ACM.

Randall, D., Harper, R., & Rouncefield, M. (2007). *Fieldwork for design: Theory and practice*. London: Springer.

Rapley, T. J. (2001). The art(fulness) of open-ended interviewing: Some considerations on analysing interviews. *Qualitative Research, 1*(3), 303-323.

Resnick, M., Maloney, J., Monroy-Hernandez, A., Rusk, N., Eastmond, E., Brennan, K., et al. (2009). Scratch: Programming for all. *Communications of the ACM, 52*(11), 60-67.

Rheingold, H. (2000). *The virtual community: Homesteading on the electronic frontier* (Rev. ed.). Cambridge, MA: MIT Press.

Ridings, C. M., & Gefen, D. (2004). Virtual community attraction: Why people hang out online. *Journal of Computer-Mediated Communication, 10*(1), http://jcmc.indiana.edu/vol10/issue11/ridings_gefen.html.

Ridings, C. M., Gefen, D., & Arinze, B. (2002). Some antecedents and effects of trust in virtual communities. *The Journal of Strategic Information Systems, 11*(3-4), 271-295.

Robinson, K., & Aronica, L. (2009). *The element: How finding your passion changes everything*. New York: Viking.

Rosson, M. B., Carroll, J. M., Zhao, D., & Paone, T. (2009). wConnect: A Facebook-based developmental learning community to support women in information technology. In *Proceedings of the Communities and Technologies Conference (C&T 2009)* (pp. 125-134). New York: ACM.

Rotman, D., Golbeck, J., & Preece, J. (2009). The community is where the rapport is: On sense and structure in the YouTube community. In *Proceedings of the Communities and Technologies Conference (C&T 2009)* (pp. 41-50). New York: ACM.

Roulston, K. (2006). Close encounters of the 'CA' kind: A review of literature analysing talk in research interviews. *Qualitative Research, 6*(4), 515-534.

Roulston, K. (2010). Considering quality in qualitative interviewing. *Qualitative Research, 10*(2), 199-228.

Satchell, C., & Dourish, P. (2009). Beyond the user: Use and non-use in HCI. In *Proceedings of the Australasian Conference on Computer-Human Interaction (OZCHI 2009)* (pp. 9-16). New York: ACM.

Schwartz, D. (1989). Visual ethnography: Using photography in qualitative research. *Qualitative Sociology, 12*(2), 119-154.

Schwarzenegger, A., & Dobbins, B. (1998). *The new encyclopedia of modern bodybuilding*. New York: Simon & Schuster.

Sellen, A. J., Fogg, A., Aitken, M., Hodges, S., Rother, C., & Wood, K. (2007). Do life-logging technologies support memory for the past?: An experimental study using sensecam. In *Proceedings of the Conference on Human Factors in Computing (CHI 2007)* (pp. 81-90). New York: ACM.

Sheppard, Z. (2010). 5,000,000,000. *Flickr Blog.* Retrieved September 21, 2010, from http://blog.flickr.net/en/2010/09/19/5000000000/

Skeels, M. M., & Grudin, J. (2009). When social networks cross boundaries: A case study of workplace use of Facebook and LinkedIn. In *Proceedings of the Conference on Supporting Group Work (GROUP 2009)* (pp. 95-104). New York: ACM.

Skitch, S. A., & Hodgins, D. C. (2005). A passion for the game: Problem gambling and passion among university students. *Canadian Journal of Behavioural Science, 37*(3), 193-197.

Smith, D. (2005). Psychology and bodybuilding. In J. Dosil (Ed.), *The sport psychologist's handbook: A guide for sport-specific performance enhancement* (pp. 617-639). Chichester: Wiley.

Smith, D., & Hale, B. (2005). Exercise-dependence in bodybuilders: Antecedents and reliability of measurement. *Journal of Sports Medicine and Physical Fitness, 45*(3), 401-409.

Sohn, T., Li, K. A., Griswold, W. G., & Hollan, J. D. (2008). A diary study of mobile information needs. In *Proceedings of the Conference on Human Factors in Computing (CHI 2007)* (pp. 433-442). New York: ACM.

Solomon, R. C. (1993). *The passions: Emotions and the meaning of life* (2nd ed.). Indianapolis, IN: Hackett Publishing.

Sontag, S. (1990). *On photography*. New York: Anchor Books.

Spears, R., Lea, M., & Postmes, T. (2007). Computer-mediated communication and social identity. In A. N. Joinson, K. Y. A. McKenna, T. Postmes & U.-D. Reips (Eds.), *The Oxford handbook of Internet psychology* (pp. 253-269). Oxford, UK: Oxford University Press.

Stebbins, R. A. (1979). *Amateurs: On the margin between work and leisure*. Beverly Hills, CA: Sage.

Stebbins, R. A. (1992). *Amateurs, professionals and serious leisure*. Montreal: McGill-Queen's University Press.

Stebbins, R. A. (2007). *Serious leisure: A perspective for our time*. New Brunswick, NJ: Transaction Publishers.

Steinfield, C., DiMicco, J. M., Ellison, N., & Lampe, C. (2009). Bowling online: Social networking and social capital within the organization. In *Proceedings of the Communities and Technologies Conference (C&T 2009)* (pp. 245-254). New York: ACM.

Steinkuehler, C. A., & Williams, D. (2006). Where everybody knows your (screen) name: Online games as "third places". *Journal of Computer-Mediated Communication, 11*(4), 885-909.

Strauss, A. L., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: Sage.

Sturges, J. E., & Hanrahan, K. J. (2004). Comparing telephone and face-to-face qualitative interviewing: A research note. *Qualitative Research, 4*(1), 107-118.

Stutzman, F., & Kramer-Duffield, J. (2010). Friends only: Examining a privacy-enhancing behavior in Facebook. In *Proceedings of the Conference on Human Factors in Computing (CHI 2010)* (pp. 1553-1562). New York: ACM.

Suhr, H. C. (2009). Underpinning the paradoxes in the artistic fields of MySpace: The problematization of values and popularity in convergence culture. *New Media & Society, 11*(1-2), 179-198.

Sundén, J. (2003). *Material virtualities: Approaching online textual embodiment*. New York: Peter Lang.

Suster, M. (2010). Social networking: The present. *TechCrunch*. Retrieved December 17, 2010, from http://techcrunch.com/2010/12/04/social-networking-present/

Sylvan, E. (2010). Predicting influence in an online community of creators. In *Proceedings of the Conference on Human Factors in Computing (CHI 2010)* (pp. 1913-1916). New York: ACM.

Tan, J.-E. (2010). The leap of faith from online to offline: An exploratory study of couchsurfing.org. In A. Acquisti, S. Smith & A.-R. Sadeghi (Eds.), *Trust and trustworthy computing* (Vol. 6101, pp. 367-380). Berlin: Springer.

Tanis, M. (2007). Online social support groups. In A. N. Joinson, K. Y. A. McKenna, T. Postmes & U.-D. Reips (Eds.), *The Oxford handbook of Internet psychology* (pp. 139-153). Oxford, UK: Oxford University Press.

Tassell, N., & Flett, R. (2007). Obsessive passion as an explanation for burnout: An alternative theoretical perspective applied to humanitarian work. *Australian Journal of Rehabilitation Counselling, 13*(2), 101-114.

Taylor, S. E. (2007). Social support. In H. S. Friedman & R. C. Silver (Eds.), *Foundations of health psychology* (pp. 145-171). Cincinnati, OH: Oxford University Press.

Theroux, L. (Writer/Director), D. Mortimer (Producer) (2000). Body Building [Documentary]. In *Louis Theroux's Weird Weekends*. UK.

Thurlow, D. C., Lengel, L. B., & Tomic, A. (2004). *Computer mediated communication: Social interaction and the Internet*. London: Sage.

Toma, C. L. (2010). Affirming the self through online profiles: Beneficial effects of social networking sites. In *Proceedings of the Conference on Human Factors in Computing (CHI 2010)* (pp. 1749-1752). New York: ACM.

Tong, S. T., Van Der Heide, B., Langwell, L., & Walther, J. B. (2008). Too much of a good thing? The relationship between number of friends and interpersonal impressions on Facebook. *Journal of Computer-Mediated Communication, 13*(3), 531-549.

Torrey, C., Churchill, E. F., & McDonald, D. W. (2009). Learning how: The search for craft knowledge on the Internet. In *Proceedings of the Conference on Human Factors in Computing (CHI 2009)* (pp. 1371-1380). New York: ACM.

Tufekci, Z. (2008). Grooming, gossip, Facebook and MySpace: What can we learn about these sites from those who won't assimilate? *Information, Communication & Society, 11*(4), 544-564.

Turkle, S. (1995). *Life on the screen: Identity in the age of the Internet*. New York: Simon & Schuster.

Utz, S. (2009). The (potential) benefits of campaigning via social network sites. *Journal of Computer-Mediated Communication, 14*(2), 221-243.

Valenzuela, S., Park, N., & Kee, K. F. (2009). Is there social capital in a social network site?: Facebook use and college students' life satisfaction, trust, and participation. *Journal of Computer-Mediated Communication, 14*(4), 875-901.

Vallerand, R. J. (2008). On the psychology of passion: In search of what makes people's lives most worth living. *Canadian Psychology, 49*(1), 1-13.

Vallerand, R. J. (2010). On passion for life activities: The dualistic model of passion. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 42, pp. 97-193). New York: Academic Press.

Vallerand, R. J., Blanchard, C., Mageau, G. A., Koestner, R., Ratelle, C., Lèonard, M., et al. (2003). Les passions de l'âme: On obsessive and harmonious passion. *Journal of Personality and Social Psychology, 85*(4), 756-767.

Vallerand, R. J., Mageau, G. A., Elliot, A. J., Dumais, A., Demers, M.-A., & Rousseau, F. (2008). Passion and performance attainment in sport. *Psychology of Sport and Exercise, 9*(3), 373-392.

Van House, N. A. (2007). Flickr and public image-sharing: Distant closeness and photo exhibition. In *Extended Abstracts of the Conference on Human Factors in Computing (CHI 2007)* (pp. 2717-2722). New York: ACM.

von Hippel, E. (2005). *Democratizing innovation*. Cambridge, MA: MIT Press.

Walther, J. B., Van Der Heide, B., Kim, S.-Y., Westerman, D., & Tong, S. T. (2008). The role of friends' appearance and behavior on evaluations of individuals on Facebook: Are we known by the company we keep? *Human Communication Research, 34*(1), 28-49.

Wang, C., & Burris, M. A. (1997). Photovoice: Concept, methodology, and use for participatory needs assessment. *Health Education & Behavior, 24*(3), 369-387.

Weiss, R. S. (1995). *Learning from strangers: The art and method of qualitative interview studies*. New York: Free Press.

Wellman, B. (1988). Structural analysis: From method and metaphor to theory and substance. In *Social structures: A network approach* (pp. 19-61). Cambridge, UK: Cambridge University Press.

Wellman, B. (2001). Physical place and cyberplace: The rise of personalized networking. *International Journal of Urban and Regional Research, 25*(2), 227-252.

Wellman, B. (2004). Connecting community: On- and off-line. *Contexts, 3*(4), 22-28.

Wells, L. (2004). *Photography: A critical introduction* (3rd ed.). New York: Routledge.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge, UK: Cambridge University Press.

White, A., Bushin, N., Carpena-Méndez, F., & Ní Laoire, C. (2010). Using visual methodologies to explore contemporary Irish childhoods. *Qualitative Research, 10*(2), 143-158.

Wills, T. A., & Shinar, O. (2000). Measuring perceived and received social support. In S. Cohen, L. Underwood & B. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 86-135). New York: Oxford Press.

Willson, M. (2010). Technology, networks and communities: An exploration of network and community theory and technosocial forms. *Information, Communication & Society, 13*(5), 747-764.

Wolfinger, N. H. (2002). On writing fieldnotes: Collection strategies and background expectancies. *Qualitative Research, 2*(1), 85-93.

Wolke, D., & Sapouna, M. (2008). Big men feeling small: Childhood bullying experience, muscle dysmorphia and other mental health problems in bodybuilders. *Psychology of Sport and Exercise, 9*(5), 595-604.

Woodruff, A., Augustin, S., & Foucault, B. (2007). Sabbath day home automation: "It's like mixing technology and religion". In *Proceedings of the Conference on Human Factors in Computing (CHI 2007)* (pp. 527-536). New York: ACM.

Wright, K. B., & Bell, S. B. (2003). Health-related support groups on the Internet: Linking empirical findings to social support and computer-mediated communication theory. *Journal of Health Psychology, 8*(1), 39-54.

Wu, A., DiMicco, J. M., & Millen, D. R. (2010). Detecting professional versus personal closeness using an enterprise social network site. In *Proceedings of the Conference on Human Factors in Computing (CHI 2010)* (pp. 1955-1964). New York: ACM.

Wyche, S. P., Hayes, G. R., Harvel, L. D., & Grinter, R. E. (2006). Technology in spiritual formation: An exploratory study of computer mediated religious communications. In *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2006)* (pp. 199-208). New York: ACM.

Ybarra, M. L., & Mitchell, K. J. (2008). How risky are social networking sites? A comparison of places online where youth sexual solicitation and harassment occurs. *Pediatrics, 121*(2), 350-357.

Appendix A

Material for Study 1

The documents in appendix A provide details on the data collection and analysis of study 1 in order to make the research process transparent and auditable. The documents listed in this appendix were referred to in chapter 4 of this thesis.

Appendix A.1   Plain Language Description for Study 1

The following document provides a plain language description of the research conducted in

study 1 for the participants. It was part of an application to the Information Systems Human

Ethics Advisory Group to approve this research and contains the reference number used by

the University of Melbourne. This document reflects the initial research interest in

persuasive technology, in particular how social network sites help to gain motivation and

influence people's behaviours. The focus on passion, as presented in this thesis, emerged in

the course of study 1 and study 2. This document was referred to in this thesis on page 75.

<div align="center">

THE UNIVERSITY OF MELBOURNE

DEPARTMENT OF INFORMATION SYSTEMS

Research Project Description (Plain Language Statement)

</div>

PROJECT TITLE:	**SOCIAL NETWORK SITES AS PERSUASIVE TECHNOLOGY: A FIELD STUDY IN BODYBUILDING**
INVESTIGATORS:	Mr. Bernd Ploderer (berndp@pgrad.unimelb.edu.au) A/Prof. Steve Howard (showard@unimelb.edu.au) Prof. Peter Thomas (petert@unimelb.edu.au)
STUDY LEVEL:	Ph.D.

What is the purpose of the study?
The purpose of this study is to get a better understanding of the sport of bodybuilding and to
investigate events related to persuasion, influence and motivation. We are interested in
events that take place online on the website BodySpace on Bodybuilding.com as well as in
events in the gym or other places in everyday life.

Why and how was I selected?
We invite you to participate in the above research project because of your experience in
bodybuilding and your active membership on the website BodySpace on Bodybuilding.com.
We found your profile using the search on BodySpace and used the website's contact form to
write to you.

What will I be asked to do?
We would like to conduct an interview either face-to-face or over telephone or online. The
interview will last approximately 60 minutes, and we request that the interview be audio-
recorded to assist in later analysis. You may refuse to answer any question in the interview
with which you feel uncomfortable.

Furthermore we would like to use public online data about you on Bodybuilding.com to raise
discussion in interviews and as complementary data for our analysis.

How will the data be used?
This study will form part of Mr Ploderer's Ph.D. thesis. Once the thesis has been completed,
a brief summary of the findings will be available to you on application at the Department of
Information Systems. The results may also be written up in the form of reports to be
presented at conferences and published in academic journals. The outcomes may be used to

develop new technologies to help people live healthier lives by motivating them to conduct regular exercise and to adhere to healthy nutrition.

How will my confidentiality be protected?
We intend to protect your anonymity and the confidentiality of your responses to the fullest possible extent, within the limits of the law. To preserve your anonymity, we will use code names for participants in the study in all written work. No individual person will be identifiable in the written reports without the expressed agreement of the individuals concerned. However, due to the small number of participants there is a possibility that people could be identified by contextual information.

As required by the University, data gathered as a result of this project will be held in locked cabinets in the Department of Information Systems, and destroyed using confidential waste disposal techniques five years after the date of last publication of results arising from this research.

Will participation prejudice me in any way?
The project does not involve any recognisable risks to participants. Please be advised that your participation in this study is completely voluntary. Should you wish to withdraw at any stage, or to withdraw any unprocessed data you have supplied, you are free to do so without prejudice. The researchers are not involved in the development of the website Bodybuilding.com. Your decision to participate or not, or to withdraw, will have no effect on the usage of the website.

Why should I participate?
We know that your time is limited and valuable and that we can offer you very little in return for your help. What we can offer you is our attention and our sincere interest in your individual story, your unique achievements and goals, and your perspectives on the sport. Your support will be a great help for the work of a Ph.D. student.

Where can I get further information?
Should you require any further information, or have any concerns, please do not hesitate to contact Mr. Bernd Ploderer on +61 4 1553 9598 or berndp@pgrad.unimelb.edu.au. Should you have any concerns about the conduct of the project, you are welcome to contact the Executive Officer, Human Research Ethics, The University of Melbourne, on ph: +61 3 8344 2073, or fax: +61 3 9347 6739.

How do I agree to participate?
If you would like to participate, please indicate in the email reply to berndp@pgrad.unimelb.edu.au that you have read and understood this information and agree to the accompanying consent form. The researchers will then contact you to arrange a mutually convenient time for a first meeting.

<div align="center">

Thank you for your support.

</div>

The University of Melbourne's Human Research Ethics Committee has approved this research project HREC Reference #0719402.1. Should you have any concerns about the conduct of this research project, please contact the Executive Officer, Human Research Ethics, at the University of Melbourne, VIC 3010, AUSTRALIA on: +61 3 8344- 2073 (Tel) or +61 3 9347-6739 (Fax).

Plain Language Statement Version 2—18 October 2007

Appendix A.2   Study 1 Website

The following screenshot shows the website used to describe the aims of study 1. It links to
the plain language statement and the consent form and it provides my contact details together
with contact details of my supervisors and the University of Melbourne's Human Research
Ethics Committee. The website was online on
http://disweb.dis.unimelb.edu.au/student/rhd/berndp/study/ for the entire duration of study 1
until it got updated for study 2. This was referred to in this thesis on page 75, 76 and 77.
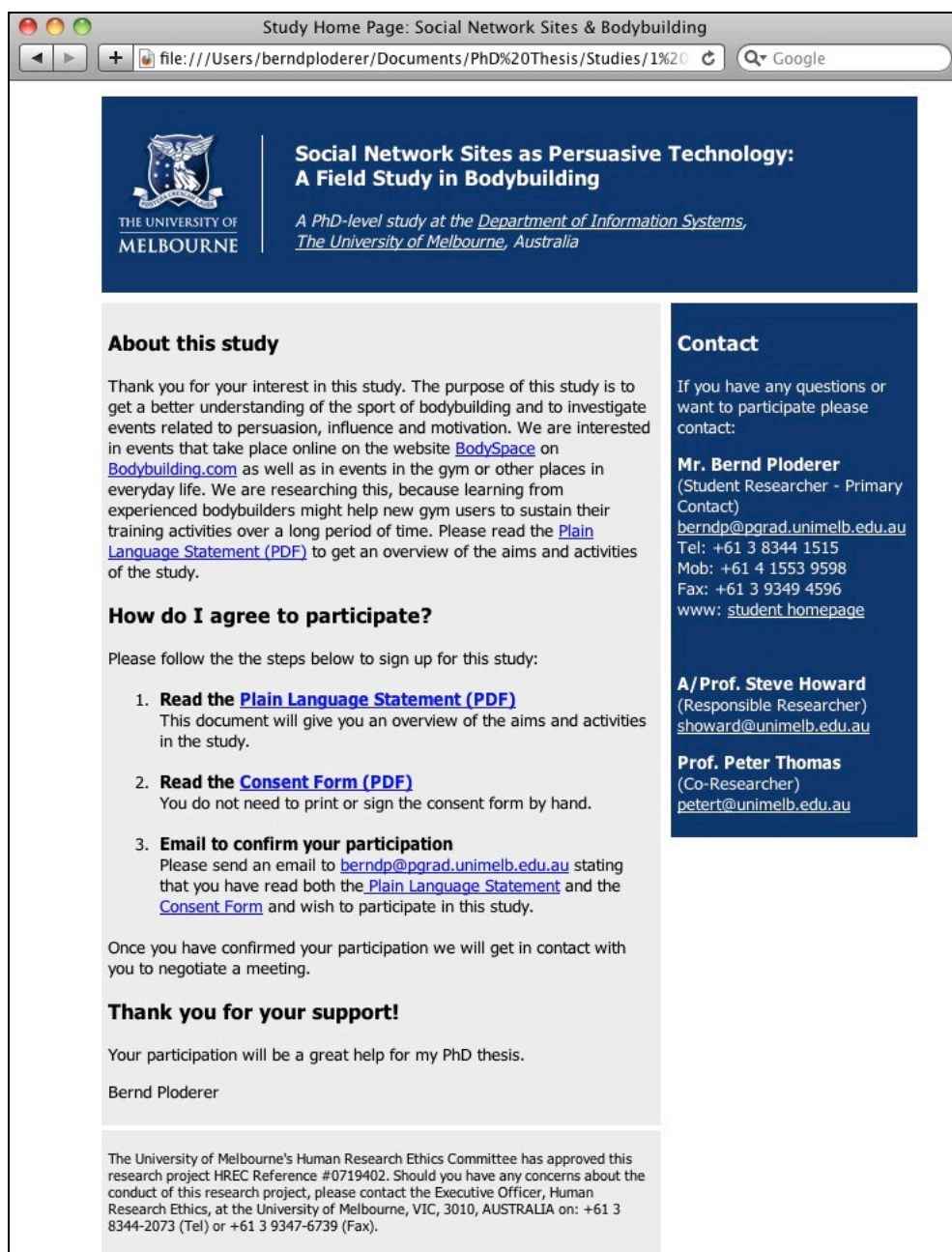
Appendix A.3   Sample Fieldnotes from Study 1

The following document provides an example of how I captured my observations at gyms and bodybuilding competitions in fieldnotes. This was referred to in this thesis on page 76.

Fieldnotes

Doherty's Gym, observation & training #1

45 Weston St., Brunswick, VIC

Thursday, 8 November 2007

11am-1pm (very quiet time in the gym)

About the gym

- Called *the* bodybuilding gym in Melbourne

- The owner J.D. also organises bodybuilding contests (a pre-study participant called referred to J.D. as someone who sits on "top of the food chain")

- open 24/7

- had famous bodybuilders like Ronnie Coleman or Jay Cutler (the 2 last Mr. Olympia winners) as guests in the last 2 years

    ➔ probably the best environment for observation of bodybuilders in their training in Melbourne

Purpose of observation

- get a feeling for bodybuilding gym environment & atmosphere

- go early -> few people -> easier to feel confident and to look around

- look for opportunities (job, talk to J.D.)

- watch interactions between people (influence, norms?)

Method

Covert participant observation, training and observation in the gym

Summary of Findings

- very little communication between gym users

- work(out) atmosphere

- I can train there

- a lot of pictures of great bodybuilders on the wall

- some similarities between people (haircut, tattoos, t-shirts (singlets), muscular)

- bodybuilders and other gym users work out in separate areas (weight area vs. cardio area)

Neighbourhood

- residential area with Melbourne-typical small family houses, small garden to street, only 1 floor (ground floor)

- opposite shopping mall including food court (McDonalds et al.), K-Mart, Coles, Safeway

- very big parking space for shopping mall in front of the gym

- in Weston St. on other side of gym are garages, factories, warehouses

Image: outside view of Doherty's gym

1st impressions

- next to a garage

- very open and transparent space

- café in gym (including a coffee machine—I thought bodybuilders wouldn't drink coffee), allows watching people in cardio area

- loud, energetic music

- reception: not unfriendly but not friendly either, only minimal interaction

  - I only showed my student ID for the concession and paid the 10 AUD, but did not get a receipt, did not have to fill in a form that states that I am healthy and train at my own risk, no filling in of address information either

- I don't have the feeling that people look at me are care too much about me

- changing room looks very old and run-down

Pictures on the wall

- pictures of bodybuilders are on every wall (above mirrors)

- big posters of contests of the last 30 years

- photos of Tony Doherty with famous bodybuilders (e.g., Dorian Yates, Ronnie Coleman, Jay Cutler) with short text, e.g., "For my friend Tony"

- photos and newspaper articles of S.D., also a former bodybuilder, one at Arnold Classic (I think with Arnold Schwarzenegger)

- own wall for pictures of Arnold Schwarzenegger above entrance to area 3, large black and white posters of Arnold posing

- newspaper articles about the gym on the floor on a pin (board opposite dispenser of cooled water)
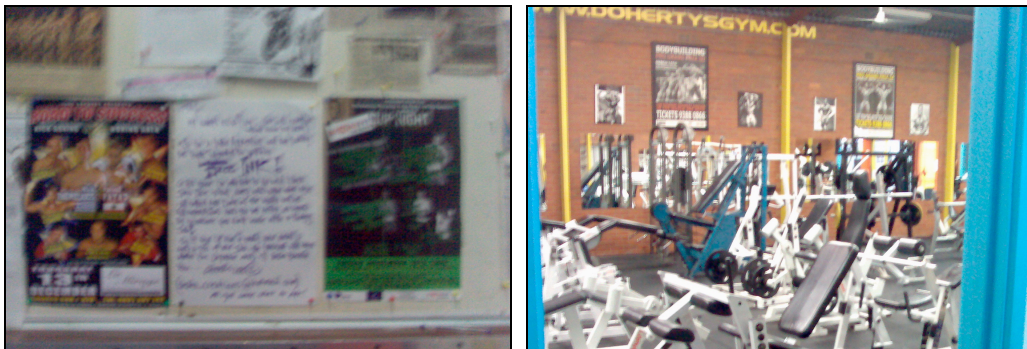
Image: 1) newspapers and letters on pin board 2) bodybuilding posters on the walls

Maps & physical setting

Map: overview of five areas
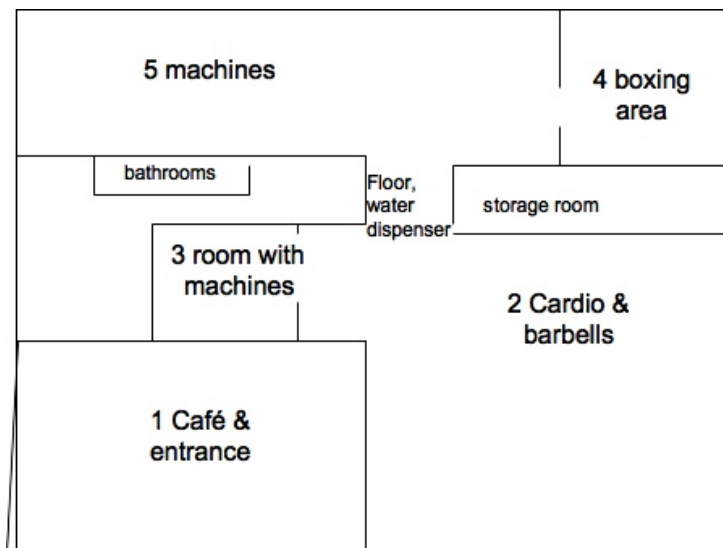
nice front, not so nice behind:

- area 1 is very nice and new, bright and colourful (red walls in café),

- area 2 has light blue walls and a lot of mirrors

- area 3 is entirely white, white walls and white machines

▪ the further you go back, the older and darker the rooms and environment—brown walls, black floor in area 4 and 5, big garage door in area 5; ceiling in 4 & 5 was not covered, only the isolation of the roof (silver foil)

Map 1: Café & entrance
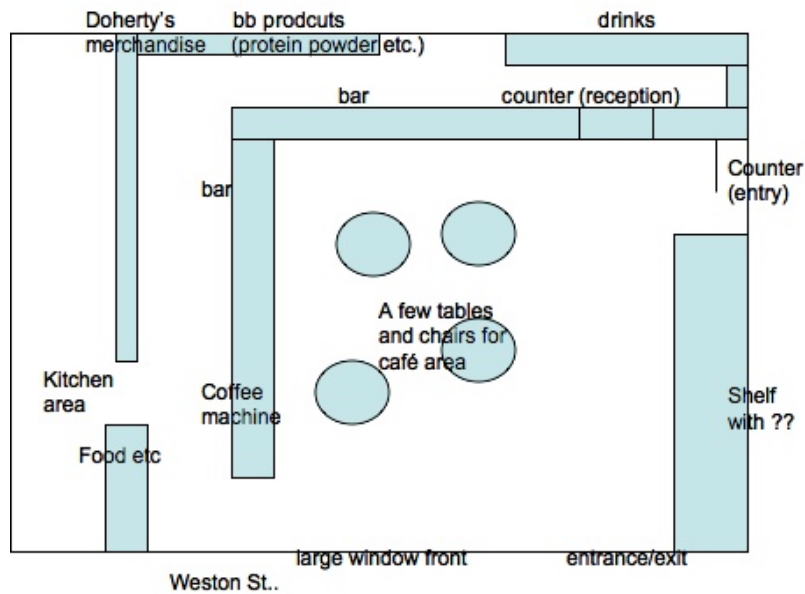
Map 2: cardio & barbells
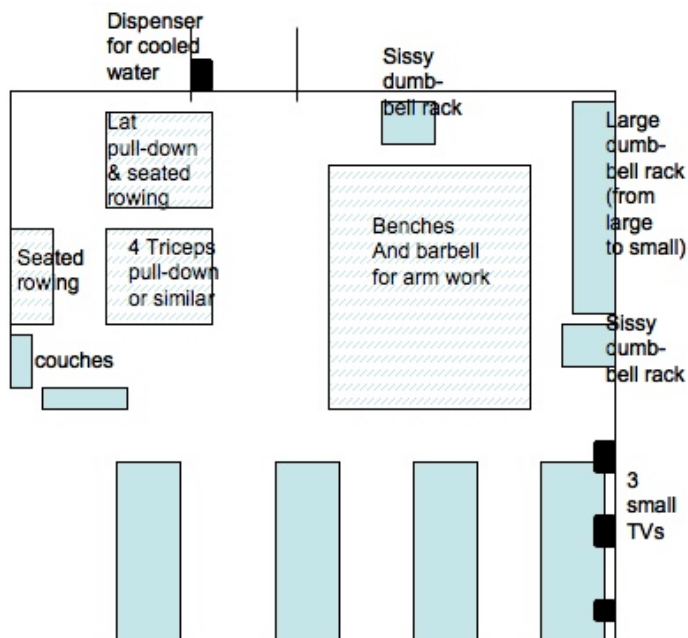
Room 3: small room with machines

just a small white room with mirrors on all walls, and white machines for abs work, and arms, chest and shoulder

Map 4: boxing area
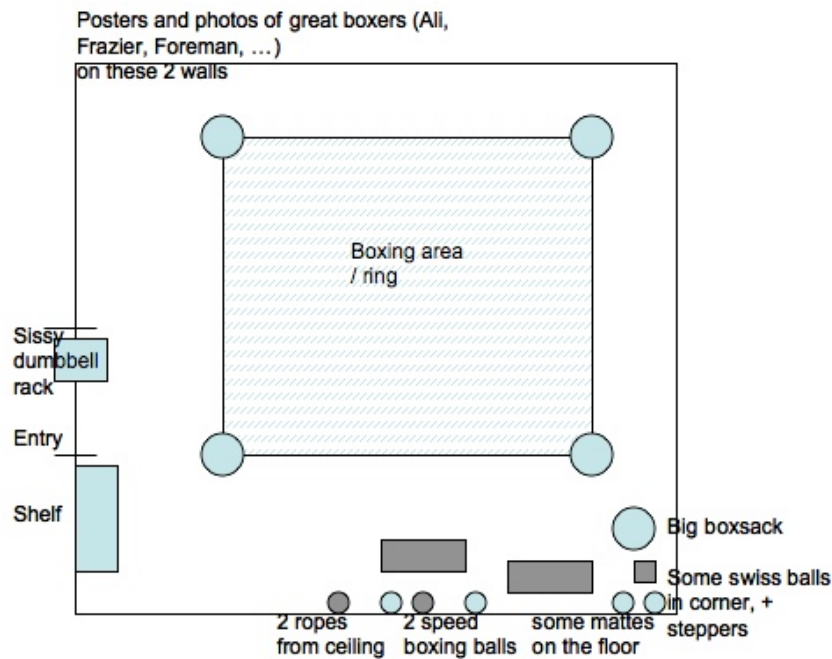
Map 5: machines
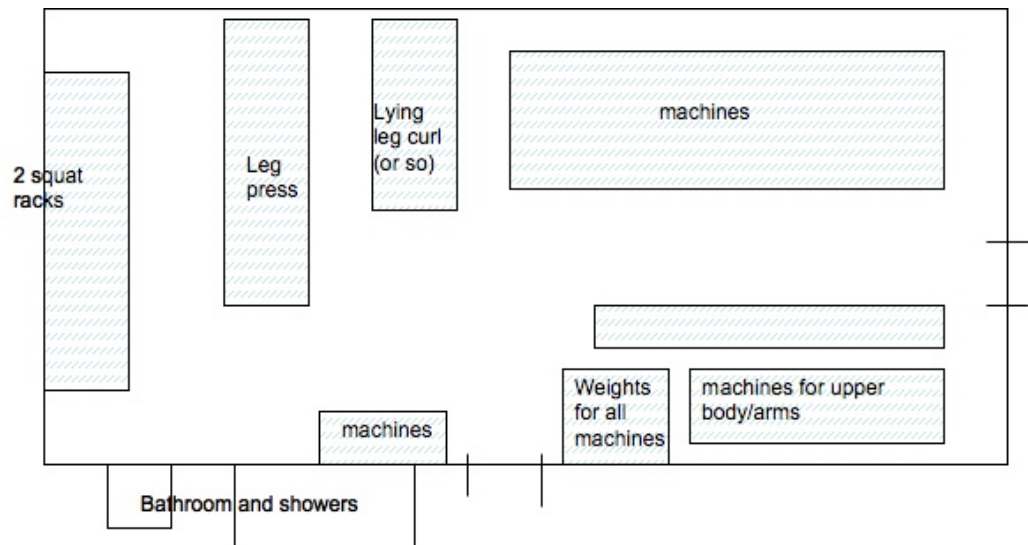
People

Staff

- entrance/counter: strong man (but not too heavy), 20-25 + second man who gave me the keys for my locker

  - spoke only a few words, not unfriendly but not inviting either

  - more talkative and friendly when I asked for membership options

- J.D. went through the gym in the background

Overview of other people in the gym

- maybe around 20 people I saw during the 1.5 hrs

- gym was relatively empty, probably due to the time of day (11am)

- predominantly stronger guys but not exclusively, maybe 5 women in total?

People training

- old (60+) man at bench who did biceps work, Falco hairstyle, maybe Italian background, good condition and good looking

- young (25), man on the stair/steps machine

- tall, 25-year-old man, who trained next to me

- 5 smaller, stronger men (all trained by themselves), in their 30's

- 2 women in boxing area

- Blonde woman in early 30's, pink t-shirt & male blonde trainer, strong man, who wore cut off jeans; she did dumbbell work at the sissy dumbbells rack in area 2

- young (20) man, worked out in 3, white t-shirt (like soccer dress), looked strong but not like the other guys, not refined, maybe he trained for another sport

- 1 or 2 men in cardio area, in 30's, one had a large belly, maybe there to lose weight

<u>There seems to be a separation of people of cardio area and weight area</u>

- another woman (dark hair, dark clothes) in cardio area on elliptical when I left, talking to a man standing beside not training, maybe her trainer, or just someone on way to training

- 2 men who came in together later, one young (20) and one in his 40's (maybe father and son, or trainer and athlete), the young man made jokes later with another person training in area 5, said something like "Tell me which machines you need, because I will use all the other machines in here"

- 2 training partners who worked out at the squat rack, strong athletes, who pushed one another to the maximum "Give me one more", some grunting, one could be the trainer because he looked more experienced, probably in late 30's, very strict army-like short hair-cut and wearing glasses with a strong black frame

Social interaction

Very little interaction between people

- not asocial place, but felt more like a workplace where people do their own work(out) and acknowledge the presence of others without being too friendly

Exceptions

- 2 x woman with male personal trainer

- 2 training partners who worked out at the squat rack, strong athletes, who pushed one another (at least one person the other person, I don't know if it was reciprocal or trainer + athlete) to the maximum "Give me one more",

- 2 men who came in together later, one young (20) and one in his 40's (maybe father and son, or trainer and athlete)

- 2 female athletes, who I saw at the end talking to each other in the middle of the gym, I think I saw them boxing in area 4

- (-> although women were in the minority, they seemed to be the more interactive)

Aspects of self-presentation of people

Dress code:

- men: all of them wore shorts, and the majority wore singlets (no sleeves)

- female: I think the women with trainers wore long leg-ins, maybe tight top, but I am not sure about this

Tattoos

- a lot of people had large tattoos on their upper arms and shoulders

- motives like crosses

- bodybuilding is of course body cult, so tattoos make sense

Haircuts

- all men had short hair, from bold to straight short, to short and messy like my hair

- reminded me of military, but probably it's also a practical thing

I did not notice "the walk", as described in Fussell's book "Muscle"

All senses

Hear:

- loud radio, not too loud so that you can speak and concentrate, but you could not hear what people were saying, music was very energetic music but not techno, e.g., played Jamiroquai / canned heat (only song I knew)

- no grunting besides the 2 guys at the squat rack

- no swearing

See:

- coffee machine (surprised to see a coffee machine in a fitness place)

- merchandise at entry

- large windows so that you can see from outside what is going on in café and in cardio area

- some big guys

Smell:

- nothing special, only in the bathroom / shower it smelled after cheap soap or a spray used in bathrooms to make it smell "nice"

Atmosphere:

- mutual respect like in work environment

- fine balance of tension to do concentrated work vs. relaxed

Technology

- I did not see any digital technology besides

- the usual technology in the cardio machines

- 3 CRT TV screens in front of the cardio area

- and a computer with a webcam to take pictures and register new members, which did not work when I came there

- NO LCD screens, no mobile technology, nobody used MP3 players during their workout

Appendix A.4   Sample Online Data in ScrapBook from Study 1

The following screenshot illustrates the functionality of the Firefox add-on ScrapBook.
ScrapBook creates a library of websites stored locally on the computer. The screenshot
shows sample online data from an online interview available on BodySpace, annotated using
comments and highlighted text. This was referred to in this thesis on page 76.
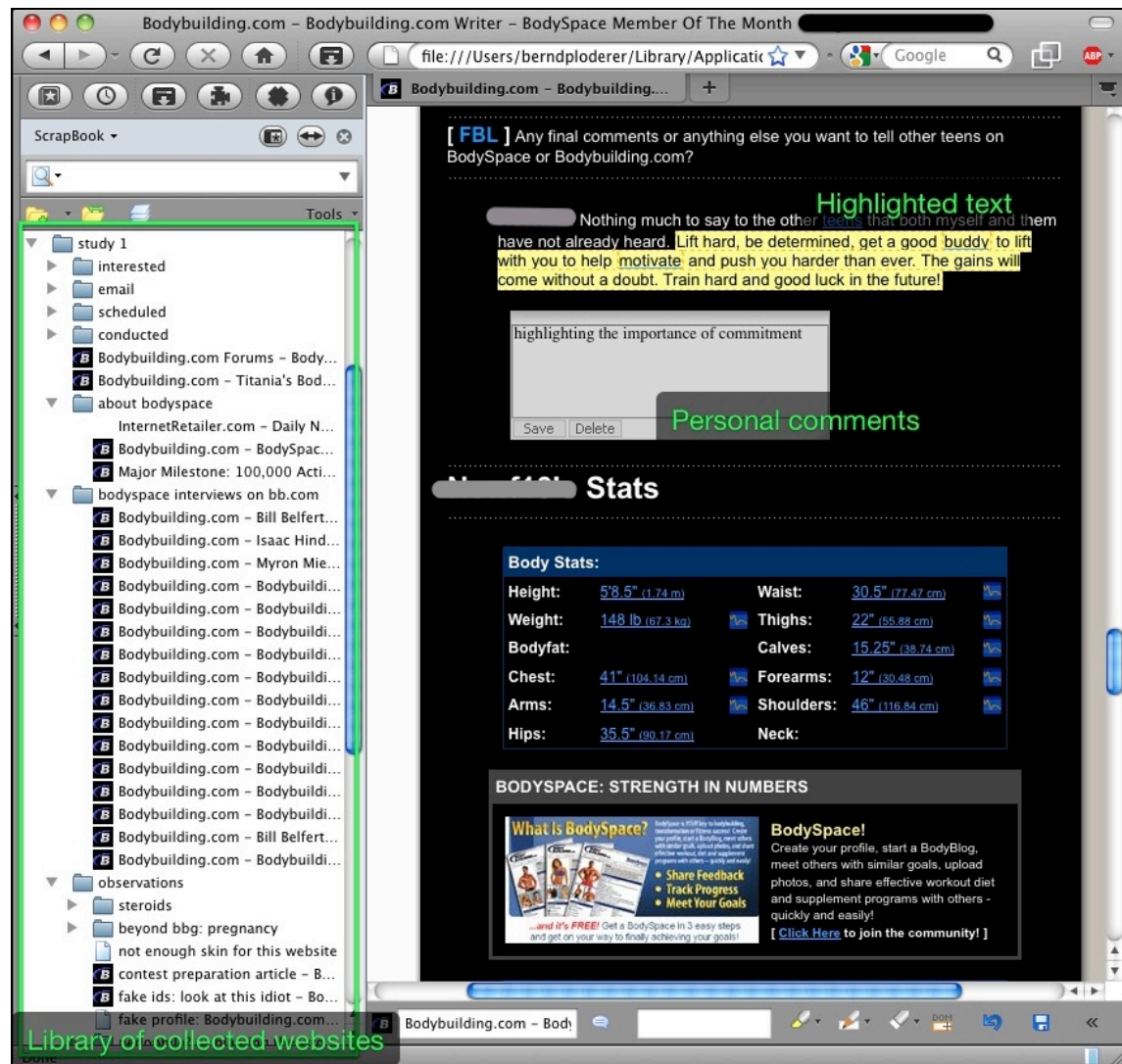
Appendix A.5   Sample Interview Questions for Study 1

The following document lists sample interview questions. These preliminary questions were part of an application to the Information Systems Human Ethics Advisory Group to approve the research carried out during study 1. I refined these questions throughout the study as my understanding of the context and the research problem developed. This was referred to in this thesis on page 78.

PROJECT TITLE: Social Network Sites as Persuasive Technology:
A Field Study in Bodybuilding

Indicative interview questions

All interviews will be semi-structured, using an interview guide with a set of predetermined questions, but also allow freedom to elaborate issues as they emerge in the conversation. The interviews will take place in the gym before or after the participant's training or at any other place and time convenient to the participant.

The questions presented here are an indicative pool of potential questions to be asked of the participants. The questions will be adapted according to the individual circumstances and findings that emerge over the series of interviews.

Bodybuilding in general

1. What has been your greatest moment in bodybuilding? How did it affect your bodybuilding career?

2. What would you do in my position to find out more about what motivates and influences bodybuilders?

3. Do you think bodybuilding is different for men and women? Do you think it is harder for one gender?

Motivation & goals

4. What's the most challenging thing when it comes to working out? What keeps you going in bodybuilding? What do you do to stay motivated?

5. What is your current goal in training? What do you want to achieve in the next 3 weeks, 3 months, 1 year, in 3 years?

6. How would you (or I) recognise that you have achieved your ultimate goal? What would be different, e.g., when you train in the gym / walk on the street / leave the house tomorrow?

7. Have you ever participated in bodybuilding or fitness competitions?

• If yes, at which contests / level / class? What were the results? What is it like to be onstage? What prompted you to start competing? What are your next planned competitions?

• If no, why not? Do you consider participating in the future? Why (not)? What do you think motivates people to participate in contests?

8. Assuming you were given a pro contract and could devote your life to bodybuilding only, how would your life be like?

9. Do you have any advice for beginners like me how to stay motivated over a long period of time?

Social relationships to peers

10. Who helps you in your training, when you have questions or problems?

11. How would your training partner / coach / online contact describe the relationship with you? How would he or she describe you, and which activities would she use as examples?

12. Would you say that bodybuilding has improved your social life or changed for the worse? Could you give me any examples to illustrate why (not)?

13. Would your best friend describe you as a person who prefers doing his/her own things or who prefers staying with others? Which examples would he or she use to underline this assumption?

Influence & behaviour change

14. Assume you would move to a rural area and could not train in your gym any more and would have to train by yourself, e.g., in the garage, what would be different?

15. Assume you were given 15 minutes to talk to Arnold Schwarzenegger/ Jay Cutler/ Ronnie Coleman (your greatest idol in bodybuilding), what would you ask him (or her)?

16. How would you persuade me to give up volleyball and to start bodybuilding?

17. What would have to happen that you would give up bodybuilding?

18. How could your partner/best friend/parents/ persuade you to give up bodybuilding?

19. How would your life look life if you couldn't body-build? What would be different? What would you miss? What would you win? How would you use your time?

Online Interaction

20. What does the website offer you that you can't get in the gym (or elsewhere offline)? What would you lose when Bodybuilding.com would decide to take offline all of its websites tomorrow?

21. I have a printed copy of your BodySpace profile with me. Could we go through it and could you tell me what it means for you?

• Where does your username come from? Could you tell me how you chose your avatar pictures?

• What would your mother/father/brother (someone close but outside bodybuilding) think when s/he sees your profile? Would s/he think your profile provides an accurate description of you?

• What are your 3 favourite website features? How do you use them? Which website features do you consider unnecessary? Would you like to have any features added that are not yet available? (How) does the website help you with bodybuilding / keep motivated?

• How many of your online Friends/Contacts have you ever met offline / do you consider a friend in real life? Have you met new friends online? How would you describe your relationship to them? How would you compare your online relationships with the relationship with your best friend (in the gym)? Is it easier to get in contact (share knowledge) with people online or in the gym?

• What type of emails, comments and responses do you get from BodySpace? What kind of positively surprising messages did you receive? Have you received any negative, surprising, shocking messages?

22. How much time do you think you spend online per day/week? How often do you log on to the system? How do you feel when you can't log on to the system, e.g., when you are away and have no Internet access?

23. Do you use a social network site like MySpace or Facebook? If yes, for which purposes? What's the difference between Facebook/MySpace and BodySpace for your usage?

Bodybuilding and other technologies

24. How do you organise or manage your training activities and plans, nutrition, rest, …?

25. Do you use diaries or statistics to document or plan your activities? Do you use them on paper or on a computer?

26. What other technologies help you to make bodybuilding easier or more enjoyable?

Appendix A.6   Descriptions of all Participants in Study 1

I wrote short descriptions of all participants to summarise key issues discussed during the interview and to capture observations I made beyond what was said during the interview. These observations contain notes on their personality, appearance and the environment in which we met. I used these descriptions together with their BodySpace profiles to keep an image of the participant in mind during my analysis of the data. These descriptions complement the demographic information provided in table 4-1 on page 77 with rich, yet succinct descriptions of all participants. This was referred to in this thesis on page 78.

Bill

Bill started to work out in the gym while he was playing basketball professionally. After a knee surgery he could not continue his basketball career, but he kept working out in the gym to stay fit and healthy.

Bill currently works as a fire fighter. Next to this job he has runs a personal training business. To lead by example for his clients and also to keep himself busy while his girlfriend was overseas, he entered a competition. The year of preparation was hard work and required a lot of time and commitment. He had a training partner who helped him in the preparation for the competition: His training partner worked out with Bill on a daily basis, gave him feedback on his progress, and kept him motivated.

Bill found BodySpace while searching for information on training and nutrition. He enjoys looking at other people's photos, but he has not gotten very active on BodySpace in terms of uploading content or interacting with other people—he said that BodySpace is more something to play around with briefly.

Catherine

Catherine went through an impressive transformation: She started to work out daily in order to lose weight and transformed her physique from being obese to being lean. She then changed her training and diet to gain muscularity in order to get ready for a competition. The idea to compete was sparked by her former employer, who suggested that she should compete. Catherine's passion for competing was then reinforced by others on BodySpace.

Her physical transformation went hand in hand with a transformation of her personalty: She said that she is not a "push-over" any more. She also wrote on BodySpace that her slogan is "Stronger, Tougher, Leaner, Meaner." However, she did not appear as confident and happy when she talked to me.

Her transformation was initially welcomed by her gym friends, but when she started to bulk up to compete in female physique bodybuilding, she faced a lot of criticism from her friends as well as from strangers in the gym, who told her that what she was doing was not very lady-like. In other words, the non-bodybuilders could not relate to her ambitions and values, whereas on BodySpace people encouraged her to compete. She said that BodySpace was much more social than the gym (even though all of her BodySpace contacts were purely online).

The progress photos on her BodySpace profile show the incredible transformation. On BodySpace she has become a role model for other women who ask her for advice and admire her achievements. For Catherine BodySpace is there to get information and to help others, to compare herself with others, and to evaluate her progress. Above all, she uses BodySpace to show off her achievements and to derive motivation from the positive feedback.

Outside of BodySpace, however, her fiancé is her only support. In the interview she said in a very sad voice "it's just him". Her fiancé supports Catherine financially so that she could give up her job to start her transformation, and he also supports her mentally. However, due to his job he is away during the week, which makes it difficult for her to stay on track for her first competition. Additionally, they just moved to a different city and bodybuilding was only a second priority to that move. In her new environment she appeared isolated and she has not yet found back to her old routine of working out. Further, she did not have access to the Internet and thus had not used BodySpace in a while. She said that she aimed to compete in the year following the interview, but guessing from her lack of activity on BodySpace since then, it seems that she may have abandoned these plans.

David

At the time of our interview, David had just returned from the Natural Olympia overseas, the biggest natural (drug-tested) bodybuilding competition. This was the first time he competed on an international level.

David sees his body as a piece of art, an object, that he describes as "art in motion". It is a piece of work that needs constant improvement and it probably will never be perfect. The other thing he says about the body is that it is very honest: On stage in a bodybuilding show you have no opportunity to hide anything. Every part of the body is judged and thus he called (natural) bodybuilding the most honest sport.

David gave up his job as an accountant to make an income as a personal trainer and to help other people get in shape. Though he spends most of his time in the gym, he mourned that nobody there can relate to his challenges and appreciate his success, because non-

bodybuilders do not understand what it means to compete. More generally, he seems to be an individualist person. He said he had no help in his bodybuilding career and he has only few friends because he does not have time.

Talking about BodySpace, he said that it provides him with a space where people appreciate his achievements. With his transformation he can also serve as a role model for others on BodySpace and show them what is possible when they change their lifestyles.

Erica

Erica is a personal trainer who coaches bodybuilders and figure competitors. Through her fitness training she is also a role model for her sons who play soccer and aspire to a professional sports career.

Erica provided me with critical insights into training, motivation and discipline required to bodybuild. She further described how she supports others in their preparation for competitions and during the actual event (tanning, oiling up body, encouragement).

George

Other bodybuilders said about George that he "sits on top of the bodybuilding food chain in Australia". George's life story sounds almost like the Australian version of Arnold Schwarzenegger, who was George's initial inspiration to work out. George used to be a bodybuilder and is now the owner of Melbourne's most prestigious bodybuilding gym. He is the organiser of the only IFBB pro show in the southern hemisphere and brings elite bodybuilders like Jay Cutler and Dexter Jackson to Melbourne. His hard work, his connections to the bodybuilding elite, and the bodybuilders in his gym all add to his prestige.

During our conversation he tried to portray bodybuilding in the best possible light. He praised bodybuilding as a sport for people at all ages. He emphasised that athletes in other sports have adopted bodybuilding knowledge to build up fitness and strength. He also stressed the comradeship amongst bodybuilders and said that bodybuilders are the same as other people, just a bit bigger.

George is not a BodySpace user, but he was a key participant in helping me to understand the motivations and challenges of bodybuilding on different levels from amateurs to the elite bodybuilders, as well as the organisation and power structures in the bodybuilding world.

James

I met James for breakfast in a café on his way to work. The first thing I noticed was his outfit. He wore a very fine blue shirt and elegant black trousers. The shirt was long-sleeved despite the 30 degrees weather forecast, it was definitely expensive, not too modern but not

old-fashioned either. He appeared very elegant and made the impression of a high-standing businessman. He later told me that he is working as a manager in a bank, while he also runs a gym together with his wife and kids.

James started to bodybuild in the 1970's. The way he told his bodybuilding story was that he started in order to impress a woman who later became his wife. He started working out under the guidance of a former Mr. Australia and soon James himself got into competition shape and kept competing throughout his time as a university student. He stopped competing in the late 1970's when steroids had become widespread. Back then competitions did no conduct drug tests and he said "you can't compete against the 'roids'". Being in his 50's now, he has started to compete again in natural (drug-tested) bodybuilding competitions, and his aim is to compete in all age classes up to his 60's or maybe even 70's. Part of the motivation to keep competing is to stay in shape.

James is not a BodySpace user. He uses the Internet to look up information on competitions and to find pictures of potential competitors to estimate his chances in upcoming bodybuilding shows. James provided me with critical insights on competition preparation, steroid use, and the social relations amongst bodybuilders in gyms.

Jarvis

Jarvis is a law student and a journalist in Melbourne, and at the same time he pursues a career as a semi-professional singer in Southeast Asia. His contract with EMI states that he needs to get in shape and bulk up for his concerts, which was the initial motivation for him to go to the gym. In other words, he was not passionate about the gym, it rather was something he needed to do. Thus, initially he found it difficult to stay committed to the gym and much rather went surfing, climbing or cycling. Now, he has a personal trainer and a training partner for the gym training to support and to push him. They hold him accountable to train regularly and help him stay on track.

BodySpace helps him as a tool to find information and to track his progress with statistics. He probably has the largest number of progress photos out of all participants. He has uploaded numerous photos taken with a cameraphone showing himself posing against the mirror. In the interviews he played down the importance of BodySpace, but the large number of photos suggests the opposite.

Socialising on BodySpace seems to be secondary for him. He used to leave comments on other people's profiles, but he does not know any of them in person. Many comments are more about fun and joking rather than about mutual admiration, which is quite unusual on

BodySpace. Jarvis uses Facebook to keep in touch with offline friends (who are usually students rather than bodybuilders).

He said that BodySpace helps mostly bodybuilders who have no offline contact with other bodybuilders: It helps them to connect people to a community online in order to overcome social isolation and geographic boundaries. He speculated that BodySpace and the Internet may water down the bodybuilding community. Instead of immersing themselves in the bodybuilding community in California, people have mediated relationships online. Bodybuilding becomes a side interest and may not have the central importance to people any more. I do not share his view in this regard, given other people's descriptions of the hard work in the preparation for bodybuilding competitions.

Jarvis is also a journalist for a student newspaper. He writes a column in which he describes his views on the extreme world of bodybuilding, the quest for obtaining a large physique, and the possible consequences of body image disorders, where bodybuilders never feel strong enough no matter how big they are.

John

John started to work out in the gym because he felt he was too skinny. He now has a group of friends in his gym that is very supportive and understands the challenges of bodybuilding. Through BodySpace he met three other bodybuilders in his area, and one of them became a close friend. These friends were important, especially because his ex-wife hated his bodybuilding activities.

John said that BodySpace was important for information, but its most important contribution is to give people a place to show off their photos of themselves posing in front of the mirror. He said that it fulfils the need of bodybuilders to be noticed.

John addressed many critical issues in bodybuilding quite directly, like the importance of applause on stage for his ego. Further, he was the only participant in study 1 who admitted steroid use, which brought him good results, but nevertheless he stopped using them. Finally, John brought up the issue of sex in bodybuilding: Bodybuilders have sexually attractive bodies. Thus, bodybuilding competitions attract muscle groupies of both sexes, and he suggested that bodybuilders also have a more attractive sex life (which is a myth according to Sam Fussell's descriptions in his book "Muscle")

Lenny

Lenny works out in the gym to lose weight and to stay in shape. His two main challenges are somewhat interrelated: First, he is socially isolated, because he does not have a training

partner and is not taken seriously in the gym (or even being bullied). Second, he finds it difficult to make the workout a regular part of his life. Thus, he is not making the desired progress and finds it difficult to stay committed.

He also had negative experiences on online discussion forums where people used the anonymity to make fun of him and to react aggressively to his questions (flaming). Thus, he likes BodySpace for the profiles where you get to see images of the other person. He uses BodySpace to ask other people for advice on training and dieting. He also makes friendships online, though all his BodySpace contacts are purely online and mostly instrumental—he sees them as a resource to ask for advice. Finally, BodySpace is a useful tool for him to monitor his progress and to compare his progress with other BodySpace users.

Mario

Mario is a university student who comes from a family with a lower income. He thinks of himself as short and he said that he had low self-esteem, which may all have been motivations for him to start training in order to boost his ego. He was further inspired by strong and powerful males like in the "Rocky" movies and like Arnold Schwarzenegger in the film "Pumping Iron".

Mario only recently started competing and described his first show as embarrassing, because he was not tanned enough and people referred to him as the "pale guy". His second competition went better. He quickly posted his competition photos online and left comments on most of his BodySpace friends' profiles to look at his photos.

He used BodySpace to talk to more experienced bodybuilders, which was especially useful at the beginning. Now he seems to learn also through contacts and experiences at competitions. He did not get into other social network sites like MySpace, because he did not see the purpose, whereas BodySpace connects people with a shared interest.

Mario also described a negative experience on BodySpace. A person who pretended to organise an online competition for teen bodybuilders contacted him. Through his online friends he found out that this person was an alleged paedophile. They only exchanged comments on the profile and there was no harm to Mario, but it sensitised Mario, so that he does not use video in MSN chats with his online contacts. There was no proof for the allegations, but BodySpace decided to delete the profile of the alleged paedophile.

Monica

Monica has been familiar with the gym since she was a kid. Her father was a gym instructor and he was and still is into bodybuilding. Monica started weight training at the age of 15

using the weights they had at home. She got inspired to compete when her father took her to a figure and bodybuilding competition, and 6 years later she competed for the first time, supported by an online personal coach during the preparation phase. Since then competitions have provided her with goals to keep her going.

BodySpace is a place where she receives additional support (in addition to her father and her coach), which was especially critical during the competition preparation. At the time of the interview she was using the blog on BodySpace, where she also posted comments on self-doubt during preparation (which was very rare in this study). Though there are hardly any comments visible on the blog (2 comments on 7 blog posts), she said that she received valuable support from her online friends and she supports others. She has no offline connection with any of these online friends.

In contrast to most other participants and users of BodySpace, Monica does not reveal any personal information and she does not even show her face on any of the photos. She said that she is very discreet and cautious and takes time to open up. She has uploaded new photos since our interview, but none of them reveal her face. Possibly, privacy is a prerequisite for discussing self-doubt and other challenges on BodySpace.

She inspires other female competitors and enjoys reading the positive comments that she gets on BodySpace when someone is inspired by her achievements. Furthermore, she uses BodySpace as a tool to get information on training and nutrition.

Rhonda

More than most other Australian participants, Rhonda lives in a world that is dominated by fitness and bodybuilding. She has always been active in the gym and worked out under the guidance of personal trainers. At the age of 22, while at uni, she had a personal trainer who was a bodybuilder, and he inspired her to enter in a fitness competition.

Since then she has become a personal trainer herself and a fitness model. She has also developed a circle of friends that is into bodybuilding and fitness competitions, which shares the same lifestyle of working out and training. These bodybuilding friends understand when she needs to diet, and they can relate to what that means and provide support. She even went so far to describe her lifestyle as a light form of obsession, because people get crazy about training and dieting. On the other hand she described the "general population" (probably some of her clients) as very energy draining, because they are not happy with their bodies and their lives.

She uses BodySpace and MySpace as a portfolio to display her modelling photos to attract more modelling jobs. She receives many comments on these photos, mostly from men. Thus, she values comments from other women, which she finds are the most genuine.

BodySpace also allows her to compare her physique and her training with other women, which is critical, because she does not know many other women offline who compete. She gets asked for advice on BodySpace, but she tends to help her friends only, because as a trainer she needs to make a living from her advice otherwise. Further, she receives many requests from BodySpace users who would like to get in shape but fail to develop a habit. She thinks that her advice would be a waste, because these people need more encompassing help on training and nutrition than a message on BodySpace.

Simon

Simon is the most successful bodybuilder of all participants in this study. At the time of the interview he was preparing for the NPC Team Universe. He later won this show and got an IFBB pro card, which means he is officially a professional bodybuilder in the most prestigious organisation. He is now allowed to enter most professional competitions. However, this does not mean that he can actually make a living from competing. I assume he is still working as a physical therapist.

BodySpace has very little instrumental value for him, but in addition to appreciation he also receives some emotional support, as discussed in the example of steroid allegations. Simon swears on natural bodybuilding and commitment for his achievements, while many bodybuilders would say that "natural IFBB pro" is a contradiction in itself, because it is impossible to turn pro without performance-enhancing drugs. Doubts on his natural achievement have also been published on online discussion forums, but Simon reported that he received support on BodySpace from another established natural professional bodybuilder.

He said in the interview, most of his colleagues at work and even at the gym have no idea that he is a bodybuilder and cannot appreciate his achievements, whereas people at shows or on BodySpace can relate to it. BodySpace is mostly a way to establish loose relationships with others and to exchange appreciation. Simon distinguishes between competitors (who can relate to his achievements) and other gym users (who do not compete), and he only adds competitors as friends on BodySpace.

Appendix A.7   Excerpts from Interview Transcripts from Study 1

The following samples of interview transcripts illustrate the richness of the data from interviews carried out face-to-face, via telephone and via email. Furthermore, these samples illustrate the kinds of questions I asked during the interviews, and they show the level of detail with which I transcribed them. This was referred to in this thesis on page 78.

Excerpt from a face-to-face interview with James

[…]

Could you tell me more about the months of dieting?

Towards the end it is real hell.

Obviously, things have evolved a lot, again the supplements help you to get rid of fat. Obviously science has progressed much, so it's a lot easier now than it used to be to get the definition. You can see it in the competitions when you look at the bodies through the years. When you look at the photos at back then and now, now it's all freaky, but then it was more about size and shape but not that cut. But now they are big through the growth hormones and various other drugs, but they've also got the definition. So the way drugs are used now, you can maintain and also have the definition.

But I never took steroids at all.

During that 3 months period it's all about the nutrition, mainly proteins, not much carbohydrates, increasing your cardio work. You get more on the bike, and walking, to get rid of the body fat. But if your are not on steroids you actually lose muscle mass at the same time you lose fat. You can't control as much as the guy who is actually on the 'roids. And you can see the difference.

And that's why I stopped competing. I stopped competing in the mid 70's because of the use of steroids that came in 75, 76. And you couldn't compete against that. If you go in naturally against guys who were on ?? (a certain drug) and all sorts of steroids in those days, even local competitions.

There were no natural competitions?

No, they only came in the mid 90's, late 90's. And leading up to that, everyone knew, as unwritten knowledge, everyone who wanted to compete at the highest level, you either took the steroids or you couldn't compete, you weren't going to win. And everyone still understands that.

But I started again to compete in the late 90's, actually it was 2000 when I started, and only because there was the ANBF, that was the association in natural bodybuilding, I think they changed the name again, now it's the INBA.

Actually, I should tell you a story to that competition. I was in a magazine for that competition. There was a story about me coming back.

Did you train in the mean time? [I missed that opportunity to ask about the comeback story]

I never stopped to train.

Did you change the training?

I trained that number of times, but not so much the intensity, in particular with the weights that I used to use as I use now. But I'm concentrating more on doing on ???, so the cardio work and the spin-bikes, jogging, playing tennis. It's more about maintaining the muscle mass but also staying fit, rather than just being big. As you get older, that's more important. [laughs]

I've always trained.

I have owned several gyms over the years.

How did that start?

I started that gym in Hampton, I set it up for a friend of mine.

I put up a gym in Ballarat. I used to work part-time with P. [the guy who trained him]. It started about 6 months, when I got bigger, I started to work in the gym there as an instructor. I was at university, so I was able to still do the instructing work.

I actually set up my own gym in Ballarat in 1979. I thought it was a good idea at that time to go in regional centre, where there weren't so many gyms. Whereas in that time in city there were a lot of competing fitness chains, there were too many of them. So I built it there, had my normal job in the city. So I live there and let my parents and my wife work in the gym. And I drive back every night, work in the gym, did my normal work here.

What's your normal work?

Now, I'm a general manager, a property fund manager, property developer and fund manager. So I distribute products and I distribute our funds basically through financially advices. I work for a company.

[…]

Excerpt from an email interview with John

[…]

When did you start to use BodySpace?

I created a BodySpace account years ago, but didn't check it again until this past summer.

What or who prompted you to sign up on BodySpace?

It was free and seemed like a good way to interact with people who shared my interest.

What is the first thing you look when you go online on BodySpace? What prompts you to log in?

I like to see who has visited my page or left comments, and I like to be supportive of others who I feel deserve recognition.

What are your 3 favourite website features? How do you use them?

Tracking visitor history

BodySpace search for specific terms (competition, specific organisations or shows…)

BodySpace main page

On your BodyBlog you wrote "At the shows I never really feel like I fit in with most people who choose this lifestyle, but I still like to be surrounded by the experience. It's the only place in my life where bodybuilding is viewed as important. At work and even in the gym most people don't really know anything about our sport."
I don't know how to make sense of that or put it in a good question, but could you try to elaborate what that means? What's the difference to those people you meet at the contests, and also, what is the difference with your gym colleagues or people at work? What's your perception of BodySpace, do you think the people here talk about bodybuilding, or do you think it is more about other things than that?

In my work life people have no idea I'm a competitive bodybuilder, they mostly think I may lift weights to stay in shape. Even at the gym I train at there are only one or two fellow competitors who understand the discipline and mindset involved in bodybuilding competition. At the shows, I enjoy watching the athletic competition on stage, and I have to admit it's nice when people introduce themselves to me and let me know they know who I am. It's also a chance to chat and help other competitors who ask questions about the sport.

BodySpace allows you to establish connections with "friends". How would you compare your relationships with friends on BodySpace with the relationship with your best friend in the gym?

Most "friends" on bodyspace are distant acquaintances who a few supportive comments are past back and forth. There are some that I may more regularly correspond with because we have met or competed with each other in the past. Other than that there is no social interaction.

Do you have friends on BodySpace who you also see in the real life?

Only the ones I compete with, or local competitors I may train with occasionally.

You have more than 30 mutual friends, but a much larger group of "fans". How do you select who you consider as a mutual friend online?

My criteria for adding friends is that they must actively compete in the sport of bodybuilding of fitness. Personally I draw a large distinction between competitors and those who just train at the gym to stay healthy.

*What type of emails, comments and responses do you get from people on BodySpace? * What kind of positively surprising messages did you receive? * Have you received any negative, surprising, shocking messages?*

I get a wide variety of emails. A few months ago I was Bodybuilding.com's "Athlete of the week", which generated a lot of traffic. I got emails from supportive comments, questions about diet and training, job offers (modelling, private security), and propositions from both men and women. I was surprised at the aggressiveness of both the male and female propositions, something I personally would never do.

[…]

Excerpt from a telephone interview with David

[…]

What kind of messages or comments did you get on BodySpace?

Some good ones actually, yeah. It's very…

[silence]

People leave messages saying, "Great proportions David!", "Great Physique", just nice to the point comments. Some of them were actually saying "Wonderful reading your profile, keep it up!" I don't need, no, actually it is nice getting nice feedback. It's not a motivating thing at all, but it's just nice there are people out there that appreciate that little that I wrote and that little I put on the website. Because I've not only said it, I've also photos saying, "this is what I've done".

You have some friends on BodySpace. Are these friends you know from the gym or do you know them only through the website? And how you would you compare those friendships online with those in real life?

To be honest, …[silence]

To be honest, I don't think I don't have what you call "a friend". I guess I've got a lot of online acquaintances. I guess they have similar habits, but there isn't, for me there isn't much back and forth dialogue. Actually that I think of it, I've had a few requests, but you know, you see so many emails, now I feel bad because I really haven't got back to them. So it's probably my, … You know, they send you…

I think I had a request from a guy from America, he was in his late 40's, and he said that he has been inspired by my email, and I never emailed him back. And I just reminded myself.

How does it compare? I don't look at it as a source of friendship, but mainly because I don't spend a whole lot of time on it. Between work and training and all that, I don't spend too much time on it. Because of that, you know, relationships need time. The friends I have now have basically been friends since I was in kindergarten. Everyone know else are just acquaintances. I've got a lot of acquaintances, but I don't call them friends, whether they would be online, Hi and by??? or Mr. Smith.

And the great thing of the gym environment is you meet so many people from different parts of the world, different parts of society, it's fantastic! It's not only a benefit of strength of your body and muscle, it's a benefit of social interaction, all in one place. I tell people, I travel people, and they say, what do you mean? And I say the world comes to me in once place, it's true. I meet Russians, I have an Austrian client actually, I have a Canadian client. The world comes to me, different nationality every day. And I ?? with them on a very personal basis.

Because I don't really have a need to look for online friendship, because I have so much quality relationships in my own daily life that I look at it this way. Fine, my clients pay me for one hour. But I'm so involved with their lives as well, I don't have time. Basically I don't have time!

I appreciate the feedback I get from people with my profile, but I don't go on there for motivational reasons, I don't look for encouragement words. My encouragement comes from within. I'm not dependant on online friends.

And if I have to compare them to real friends. I only have a couple of real friends, which sounds sad, but they are genuine friends, which goes back to when I was 3 years old. I'm 32 now, so we have been friends for 29 years. If you talk about friendship, that's my idea of friendship. It's loyalty, it's everything. I have only 3 friends like that, those are my best friends. So everyone else to me, it's hard to measure up my friendship with them.

[…]

Appendix A.8   Coded Samples of Study 1 Raw Data in NVivo

The following screenshot of NVivo illustrates different instances of raw data coded with 'emotional support' in the lower part of the image. This code is one of five different kinds of social support identified Wills and Shinar (2000), which are listed in the tree nodes section in the upper part of the image. This was referred to in this thesis on page 80.

Appendix A.9   Hierarchy of NVivo Codes in Study 1

The following screenshot of NVivo shows the hierarchy of codes within the theme 'theatre'. The numbers next to the codes illustrate the frequency of this code in all raw data, and the number of documents referring to this code. This was referred to in this thesis on page 81.
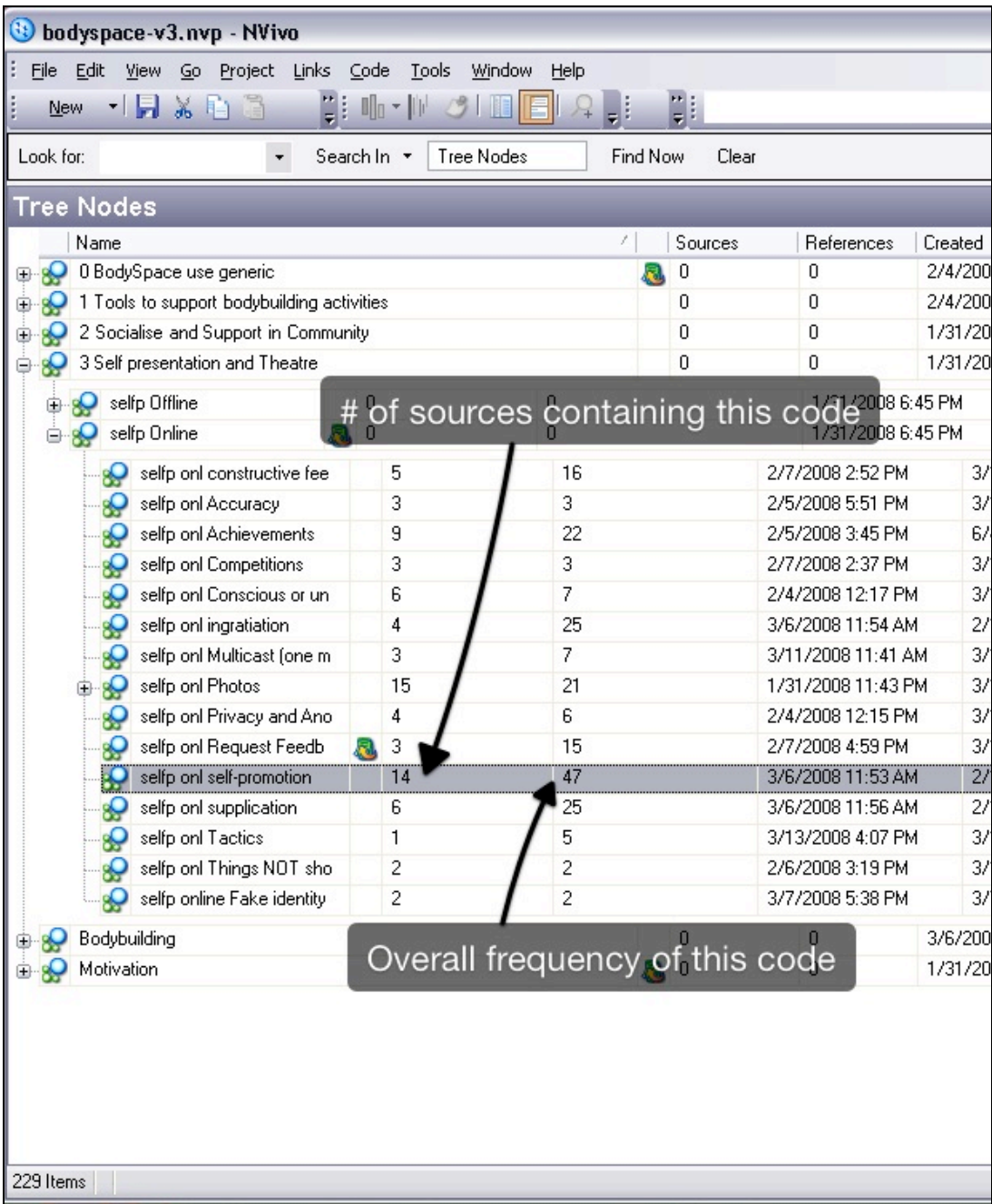
Appendix B
Material for Study 2

The documents in appendix B provide details on the research process during study 2. They provide additional information on the data collection and analysis in order to facilitate an audit of my research process. The documents listed in this appendix were referred to in chapter 5 of this thesis.

Appendix B.1   Plain Language Description for Study 2

The following document provides a plain language description of the research conducted in study 2 for the study participants. This document was part of an application to the Information Systems Human Ethics Advisory Group to approve this research, and it was referred to in this thesis on page 118.

THE UNIVERSITY OF MELBOURNE DEPARTMENT OF INFORMATION SYSTEMS Research Project Description (Plain Language Statement)		THE UNIVERSITY OF MELBOURNE
PROJECT TITLE:	**THE POTENTIALS OF SOCIAL NETWORK SITES FOR MOTIVATION: A FIELD STUDY IN BODYBUILDING**	
INVESTIGATORS:	Mr. Bernd Ploderer (berndp@pgrad.unimelb.edu.au) A/Prof. Steve Howard (showard@unimelb.edu.au) Prof. Peter Thomas (petert@unimelb.edu.au)	
STUDY LEVEL:	Ph.D.	

What is the purpose of the study?

The purpose of this study is to get a better understanding of the sport of bodybuilding and to investigate events related to influence and motivation. We are interested in events that take place online on the website BodySpace on Bodybuilding.com as well as in events in the gym or other places in everyday life.

Why and how was I selected?

We invite you to participate in the above research project because of your experience in bodybuilding and your active membership on the website BodySpace on Bodybuilding.com. We found your profile using the search on BodySpace and used the website's contact form to write to you.

What will I be asked to do?

If you agree to participate we ask you to contribute in three different ways:

1. Interviews: We would like to conduct up to 10 interviews either face-to-face or over telephone or online over a period of up to 12 months. These interviews will last approximately 30 minutes, and we request that the interviews be audio- or videorecorded to assist in later analysis. You may refuse to answer any question in the interview with which you feel uncomfortable.

2. Online tasks: For some interviews we will get in contact with you one week ahead to ask you for information that we would like to discuss in the interviews. We will ask you via email to conduct quick tasks, such as sending us specific photos from your workout environment and the website BodySpace or finishing statements like "My best friend in the gym is …". We strive to minimise your time committment for these tasks to 10 minutes.

3. Video: We would like to create a short video to have an outcome of the study that we can give back to you and that you may want to share with others on BodySpace. The video should present your achievements and your reflections on bodybuilding. It will contain clips from the interviews and other content that you may want to record. We will record and discuss the video as part of the interviews.

We ask you to allow us two further instances of involvement with your training regime that will not require any effort on your part:

1. Observations: In order get an understanding of your workout environment we would like to conduct one observation there while you train. This means one researcher will use the gym to train by himself, observe the environment and take notes. We will not interfere with your or anyone else's training.

2. Online data: We would like to use public online data about you on Bodybuilding.com to raise discussion in interviews and as complementary data for our analysis.

How will the data be used?

This study will form part of Mr Ploderer's Ph.D. thesis. Once the thesis has been completed, a brief summary of the findings will be available to you on application at the Department of Information Systems. The results may also be written up in the form of reports to be presented at conferences and published in academic journals. Presentations may contain photos or videos if explicit agreement is expressed. The outcomes may be used to develop new technologies to help people live healthier lives by motivating them to conduct regular exercise and to adhere to healthy nutrition.

How will my confidentiality be protected?

We intend to protect your anonymity and the confidentiality of your responses to the fullest possible extent, within the limits of the law. To preserve your anonymity, we will use code names for participants in the study in all written work. No individual person will be identifiable in the written reports or audiovisual material without the expressed agreement of the individuals concerned. However, due to the small number of participants there is a possibility that people could be identified by contextual information.

As required by the University, data gathered as a result of this project will be held in locked cabinets in the Department of Information Systems, and destroyed using confidential waste disposal techniques five years after the date of last publication of results arising from this research.

Will participation prejudice me in any way?

The project does not involve any recognisable risks to participants. Please be advised that your participation in this study is completely voluntary. Should you wish to withdraw at any stage, or to withdraw any unprocessed data you have supplied, you are free to do so without prejudice. The researchers are not involved in the development of the website Bodybuilding.com. Your decision to participate or not, or to withdraw, will have no effect on the usage of the website.

Why should I participate?

We would like to create a video with you, which you can post on YouTube or on your BodySpace. The video should present your individual bodybuilding story, your unique achievements and goals, and your perspectives on the sport, but eventually it's up to you what you would like to include. It may contain clips from the interviews and other scenes

you would like to record, e.g., in your gym. We hope you will enjoy the process as well as the resulting video.

We know that your time is limited and valuable and that we can offer you very little in return for your help, but your support will be a great help for the work of a Ph.D. student.

Where can I get further information?

Should you require any further information, or have any concerns, please do not hesitate to contact Mr. Bernd Ploderer on +61 4 1553 9598 or berndp@pgrad.unimelb.edu.au. Should you have any concerns about the conduct of the project, you are welcome to contact the Executive Officer, Human Research Ethics, The University of Melbourne, on ph: +61 3 8344 2073, or fax: +61 3 9347 6739.

How do I agree to participate?

If you would like to participate, please indicate in the email reply to berndp@pgrad.unimelb.edu.au that you have read and understood this information and agree to the accompanying consent form. The researchers will then contact you to arrange a mutually convenient time for a first meeting.

<p style="text-align:center">Thank you for your support.</p>

The University of Melbourne's Human Research Ethics Committee has approved this research project HREC Reference #0719402.3. Should you have any concerns about the conduct of this research project, please contact the Executive Officer, Human Research Ethics, at the University of Melbourne, VIC 3010, AUSTRALIA on: +61 3 8344- 2073 (Tel) or +61 3 9347-6739 (Fax).

Plain Language Statement Version 5—28 August 2008

Appendix B.2   Study 2 Website

The following screenshot shows the website used to describe the aims of study 2. It links to the plain language statement and the consent form and provides my contact details together with contact details to my supervisors and the University of Melbourne's Human Research Ethics Committee. The website was online on http://disweb.dis.unimelb.edu.au/student/rhd/berndp/study/ for the entire duration of study 2. This was referred to in this thesis on page 118 and 120.

**The Potentials of Social Network Sites for Motivation:
A Field Study in Bodybuilding**

*A PhD-level study at the Department of Information Systems,
The University of Melbourne, Australia*

What is the purpose of this study?

Thank you for your interest in this study. The purpose of this study is to get a better understanding of the sport of bodybuilding, the relationships formed through the sport, and the motivational challenges. We are interested in events that take place online on the website BodySpace on Bodybuilding.com as well as in events in the gym or other places in everyday life. We are researching this, because learning from experienced bodybuilders might help other gym users to sustain their training activities over a long period of time.

What will I be asked to do?

We would like to meet you and talk with you about topics such as training activities, competition preparation, bodybuilding friendships as well as your use of the website BodySpace on Bodybuilding.com. We would like to conduct 4 interviews with you over a period of 6 months to get a better understanding about the different activities and challenges involved in the preparation for a competition as well as in off-season time. Please read the Plain Language Statement (PDF) to get an overview of the aims and activities of the study.

Why should I participate?

We plan to create a video with you, which you can post on YouTube or on your BodySpace. The video should present your individual bodybuilding story, your unique achievements and goals, and your perspectives on the sport, but eventually it's up to you what you would like to include. It may contain clips from the interviews and other scenes you would like to record, e.g., in your gym. We hope you will enjoy the process as well as the resulting video.

We know that your time is limited and valuable and that we can offer you very little in return for your help, but your support will be a great help for my PhD thesis.

How do I agree to participate?

Please follow the the steps below to sign up for this study:

1. **Read the Plain Language Statement (PDF)**
   This document will give you an overview of the aims and activities in the study.

2. **Read the Consent Form (PDF)**
   You do not need to print or sign the consent form by hand.

3. **Email to confirm your participation**
   Please send an email to berndp [at] pgrad.unimelb.edu.au stating that you have read both the Plain Language Statement and the Consent Form and wish to participate in this study.

Once you have confirmed your participation we will get in contact with you to negotiate a meeting.

Thank you for your support!

Bernd Ploderer

The University of Melbourne's Human Research Ethics Committee has approved this research project HREC Reference #0719402.2 Should you have any concerns about the conduct of this research project, please contact the Executive Officer, Human Research Ethics, at the University of Melbourne, VIC, 3010, AUSTRALIA on: +61 3 8344-2073 (Tel) or +61 3 9347-6739 (Fax).

Contact:

If you have any questions or want to participate please contact:

Mr. Bernd Ploderer
(Student Researcher - Primary Contact)
berndp [at]
pgrad.unimelb.edu.au
Tel: +61 3 8344 1554
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www: student homepage

A/Prof. Steve Howard
(Responsible Researcher)
showard [at] unimelb.edu.au

Prof. Peter Thomas
(Co-Researcher)
petert [at] unimelb.edu.au

Appendix B.3   Sample Interview Questions for Study 2

The following document lists sample interview questions. These preliminary questions were part of an application to the Information Systems Human Ethics Advisory Group to approve the research carried out during study 2. I further refined these questions as I developed a better understanding of the setting. This was referred to in this thesis on page 118 and 121.

PROJECT TITLE: The Potentials of Social Network Sites for Motivation:
A Field Study in Bodybuilding

Indicative interview questions

All interviews will be semi-structured, using an interview guide with a set of predetermined questions, but also allow freedom to elaborate issues as they emerge in the conversation. The interviews will take place in the gym before or after the participant's training or at any other place and time convenient to the participant.

The questions presented here are an indicative pool of potential questions to be asked of the participants. The questions will be adapted according to the individual circumstances and findings that emerge over the series of interviews.

General information

Bodybuilding career

1.   Could you tell me how you started bodybuilding?
2.   What has been your greatest moment in bodybuilding? How did it affect your bodybuilding career?
3.   Have you ever participated in bodybuilding or fitness competitions?
    ▪   If yes, at which contests / level / class? What were the results? What is it like to be onstage? What prompted you to start competing? What are your next planned competitions?
    ▪   If no, why not? Do you consider participating in the future? Why (not)? What do you think motivates people to participate in contests?
4.   What prompted you to compete or to think about competing?
5.   What would you do in my position to find out more about what motivates and influences bodybuilders?
6.   Do you think bodybuilding is different for men and women? Do you think it is harder for one gender?
7.   How would your life look life if you couldn't body-build? What would be different? What would you miss? What would you win? How would you use your time?

The research project

8.   Do you understand the project and what we are asking you to do?
9.   Do you have any questions or comments for us about the project and about what we are trying to achieve?
10. Do you have any comments on what you want us to achieve with our research?

Community aspects

Social relationships to peers and social support

11. Could you tell me more about the place where you train? What kinds of people train there? Do you like it there? Do you feel comfortable there? Do you get support there?

12. Do you work out alone or with a training partner? If you have a training partner, could you tell me more about how you help each other in the training?

13. Do you have friends you meet in the gym or at competitions? Could you tell me more about them? How often do you meet them?

14. Who helps you in your training, when you have questions or problems?

15. Could you tell me more about other people who were involved in your bodybuilding career? What did you learn from them? How did they support, influence or inspire you?

16. How many friends do you have related to bodybuilding activities?

17. Do you get help from your family, friends outside the gym or co-workers? Can they relate to what you are doing?

18. When you interact with other people on BodySpace, what type of emails, comments and responses do you get from people on BodySpace?

19. Do you have people on BodySpace with whom you interact more often or regularly? Could you tell me more about them?

20. How many friends do you have on BodySpace?

21. Who is your best friend on BodySpace? Could you tell me more about him or her?

22. How do you decide whether you add someone as a friend on BodySpace?

23. How would you compare your online relationships with the relationship with your best friend (in the gym)?

24. Have you ever asked someone on BodySpace for support? What was the response?

25. Have you met people online who you also meet in the gym or at competitions?

Bodybuilding values

26. What is the difference between a bodybuilder and other gym users?
Could you tell me how you define a bodybuilder or where you draw the line between bodybuilders and not-bodybuilders?

27. Do you think bodybuilders are different from other people? I read a statement by a professional bodybuilder in a magazine that said "We are like everybody else, just a little bigger", what do you think about that?

28. Would you say that bodybuilding is a healthy activity?

29. Someone called bodybuilding "the hardest sport", what do you think about that?

30. Could you tell me more about the common bodybuilding slogan "Dedication, Determination, Discipline"? What does that mean for you?

31. Some people call bodybuilding their "obsession", what is your view on that?

32. How would you describe the camaraderie among bodybuilders?

Self-presentation aspects

Online Interaction and self-presentation

33. What does the website offer you that you can't get in the gym (or elsewhere offline)? What would you lose when Bodybuilding.com would decide to take offline all of its websites tomorrow?

34. I have a printed copy of your BodySpace profile with me. Could we go through it and could you tell me what it means for you?

- Where does your username come from? Could you tell me how you chose your avatar pictures?
- What would your mother/father/brother (someone close but outside bodybuilding) think when s/he sees your profile? Would s/he think your profile provides an accurate description of you?
- What are your 3 favourite website features? How do you use them? Which website features do you consider unnecessary? Would you like to have any features added that are not yet available? (How) does the website help you with bodybuilding / keep motivated?
- What type of emails, comments and responses do you get from BodySpace? What kind of positively surprising messages did you receive? Have you received any negative, surprising, shocking messages?

35. Do you think other people present themselves truthfully on BodySpace?
36. How much time do you think you spend online per day/week? How often do you log on to the system? How do you feel when you can't log on to the system, e.g., when you are away and have no Internet access?
37. Do you use a social network site like MySpace or Facebook? If yes, for which purposes? What's the difference between Facebook/MySpace, and BodySpace for your usage?

Tool aspects

Motivation & Goals

38. Could you tell me more about the challenges involved in the preparation for a competition?
39. What's the most challenging thing when it comes to working out? What keeps you going in bodybuilding? What do you do to stay motivated?
40. What is your current goal in training? What do you want to achieve in the next 3 weeks, 3 months, 1 year, in 3 years?
41. How can other people help to motivate you?
42. Do you have any advice for beginners like me how to stay motivated over a long period of time?

BodySpace as a tool

43. How does the website help you to stay motivated?
44. How do you monitor your progress?
45. Who do you ask for advice or information about training regimes or nutrition?
46. How is BodySpace connected with your gym activities?
47. Do you use BodySpace differently during off-season times as compared to competition times?
48. How do you judge the quality of advice or information you get from others (online)?
49. Do you look at other people's profiles on BodySpace? What do you find interesting on other people's profile pages?
50. How do you judge another person's bodybuilding experience on BodySpace?

Appendix B.4   Excerpt from Study 2 Online Data Captured in ScrapBook

The following screenshot illustrates the clusters of online data collected during study 2. I used the Firefox add-on ScrapBook, which creates a library of websites stored locally on the computer. The screenshot shows the ScrapBook library on the left, and the BodySpace profile of a professional bodybuilder on the right. This was referred to in this thesis on page 118.

Appendix B.5   Excerpt from Fieldnotes from a Bodybuilding Show

The following document provides an example of how I captured my observations during my observations in bodybuilding competitions. During this particular competition I watched one of the participants in study 2 (Paul) compete. This was referred to in this thesis on page 119.

Fieldnotes

2008 ANB Victorian Champtionships

Sun, 5 October 2008

12pm-3pm

Union Hall, La Trobe University, Bundoora Campus, VIC, Australia

costs: 35$

My Questions to the Event

What are the relationships amongst the competitors, audience like?

Can I observe any notions of support, competitiveness, rivalry status hierarchies?

How will the participant who invited me to the show (pseudonym Paul) perform?

About the Event

I found out about the event through a participant in study 2 (pseudonym Paul). He chose this event to be his first competition. I came early to watch Paul (pseudonym) in the novice class, but left after his performance and therefore didn't see the main categories of figure and bodybuilding competitors.

Announcement of Event Online

http://www.anb.com.au/victoria.aspx

Event Location

Union Hall, La Trobe University, Bundoora Campus, Melbourne, VIC, Australia.

- Building probably from 70's, made of bricks and concrete (not very charming from the outside)
- large hall with stage in front
- booths that sell merchandise, food supplements to the side and to the back, e.g., Max's, Horley's
- all rows of seats were filled or reserved
- the balcony had a few seats left

- in addition to rows of seats there were round tables for approx. 8 people that support one competitor; the name of the competitor was on the table; the tables were to the side and behind the other seat rows.

- in contrast to other shows the hall was not completely dark. In this way you could see people, tables and booths

 photo of Union Hall from outside

 photo of the round tables and booths

 photo of the stage

ANB Victorian Competition

ANB stands for Australian Natural Bodybuilding, but I haven't heard of this federation or a related organisation internationally. INBA and NABBA are the ones I know that are internationally relevant natural bodybuilding associations. Although the ANB website states that it has international events I doubt the international relevance of this federation.

The competition had a lot of classes for novices and young competitors, for teens, novices, under 22 both for short and for tall men. This might be a good federation to start competing and get a good ranking.

A *natural* bodybuilding event. The website http://www.anb.com.au/drugs.aspx states:

- "Bodybuilders may be subject to random testing if they are competing at national and state events."

- Someone in my study indicated that even at natural shows drug tests are very unlikely. However, judges would be able to identify whose performance was based on steroids and who is natural.

The **Victorian** competition means that this is a qualifier for the Australian contest. That means that this is a show with a lower density of high-level competitors, and that it serves as an entry point for beginners.

The event was organised by Maria McCarter. She also organises the preparation workshops for new competitors, in which people learn about training, diet, posing, tanning, and other aspects of contest preparation.

Observations

Audience

The "usual" audience:

- lots of big / buff guys with their partners or families and kids

- but also non-bodybuilders, e.g., families or friends that provide support

- some extreme / extravagant people:

    o women with noticeable make-up

    o men with interesting haircuts, e.g., man with long hair and pony tail and big earrings

    o most men have either shaved hair or mohawks

    o some tattoos—**body cult**

- Again, despite the presence of many non-bodybuilders I felt relatively weak and not normal, because most people were buff or there with other buff people

- Again I felt that I was the only person who went there alone

[…]

Performance of Paul (pseudonym)

Competed for the first time in under 22 years, short man

- Competitor number 36

- in excellent shape, very ripped (low body fat, excellent muscle definition; probably the most ripped person in his class)

- good tan, dark but still natural (didn't look like a bronze statue)

- positive attitude on stage: **he looked like as if he enjoyed competing**; his white teeth were shining contrasted by the dark, fake-tanned face

- very elegant movement on stage between the poses

- excellent posing—won the best poser award

- appeared to be **very confident on stage**, as if this was his natural environment, seemed to be in his element while competing

- thanked his mum "for feeding me"

- had a good and loud **support group** in the audience that cheered for him and yelled his name (like I did): "Let's go Paul" and other stuff.

  - his support group was second best to the group of the competitor before him, who had an amazing and very loud audience—I guess that can make a difference for your confidence on stage

- **Finishes in 2ⁿᵈ place** of 6 or 7 competitors; according to the MC it was a close result between the two (the MC also mentioned their names—Chris and Paul (pseudonym) several times during the posing, and I think they were the only names that he knew without looking at the list—maybe they were already favourites before (he mentioned something that there was a battle expected after the registration or weighing or whatever?)

- Paul congratulated other competitors when they win

- Paul was interviewed by MC at the end, something about "**great sportsmanship**" and maybe an injury / wheel chair?

photo Paul in the middle hitting the side chest

I met Paul outside when I left the show:

- He was sitting in the sun on the ground while his friends were standing around him

  - about 10 people, mostly guys in the same age as Paul (22)

  - his friends didn't look like bodybuilders or gym users

- his tan was very intense, which you only notice when you get close to someone

- **I thought he can be very proud of himself**; he had the best muscle definition, excellent posing and movement, and almost won

- I congratulated him to the show and the result and he stood up and shook my hand

  - **Ethical question**: I don't have explicit ethics clearance and I don't want to influence participant. How can I get the inside understanding of an ethnographer and at the same time try to keep the professional distance?

Reflections

Social relationships

- people seem to know a few others—I felt I was the only one there who was alone

  - maybe from same gym

  - or come with partner, family and kids

- o circle of friends (from gym and outside gym)

- o or bodybuilding couples

- ▪ I heard people chatting during the show, mainly about the show, e.g., who will win this class, what are the chances of the person they support

- ▪ at booth people chatted about products, food, …

Social support

- ▪ Some people brought a cheer squat, sometimes from gym (they cheered for several people), sometimes family, friends

- ▪ training partner backstage

- ▪ shake hands on stage

Competitiveness / hierarchy / seniority

- ▪ I did not notice any hostile behaviour, probably because I watched only female competitors (maybe less competitive) and novice males who in their first show are more concerned with themselves than with their placement

Questions that I can ask Paul in the next interview:

What was Paul (pseudonym) interviewed about after the ceremony on stage? (I think it was something about sportsmanship and a wheelchair?) Unfortunately I could not understand what was said, because I focused on filming and taking photos, and then although on video the microphone didn't pick up the signal.

How did Paul (pseudonym) **enjoy being on stage?** (My feeling was that he enjoyed it very much, according to facial expression with smile, the elegant moves and poses)

What about the **support group?** Who came? What did they do? Could you hear them on stage (they were quiet loud)? Does it make a difference to hear familiar voices on stage? Was his mum there (he thanked her for her support)?

How did you feel about the result (2nd place, best poser award)? Deserved? Did you know him before? (The MC said something that it looked like a close battle after registration or whatever)

Will you continue? When next show?

How did you celebrate?

[…]

Appendix B.6 Descriptions of All Participants in Study 2

I wrote short descriptions of all participants after each interview to summarise key issues discussed during the interview and to capture observations I made beyond what was said during the interview. These observations contain notes on their personality, appearance and the environment in which we met. I used these descriptions together with their BodySpace profiles to keep an image of the participant in mind during my analysis of the data. This was being referred to on page 121.

Andy

Andy is a personal trainer and experienced bodybuilder, in a small town North of San Francisco. He has competed for more than 5 years and shares his house with his training partner who also competes. Andy finds the diet challenging, but he loves stepping on stage to compete. In 2008 he qualified for the Natural Olympia, the most important bodybuilding competition for natural (drug-tested) bodybuilding, which took place in between the 2 interviews.

Being in a place and gym with no other bodybuilders other than his training partner, Andy uses BodySpace to meet other competitors, who share his passion, to post photos and to get compliments and questions for advice from bodybuilding fans.

Andy has an eight-year-old daughter, who spends time with him at the gym and sometimes comes to competitions. Andy was single in interview 1, wondering how to find a partner that also shares or at least supports his interest for bodybuilding. At the time of interview 2 he told me about having found someone who he dates.

Andy brought up the issue of insecurity amongst bodybuilders. He said that many bodybuilders he met used bodybuilding as a way to strengthen their self-confidence. However, creating a large appearance only partly solves the problem, and partly it increases the problem due to the discrepancy of look and feeling.

Chris

Chris has carried over his passion for wrestling into fitness training. The healthy lifestyle and the ability to perform under difficult circumstances learned through bodybuilding have also helped him to make it through the time of his placement as a soldier in Iraq.

Chris has competed in less bodybuilding competitions than most others in study 2, but he seems to be the most successful bodybuilder in terms of his professional career. He runs a

successful personal training business. He is very good looking and works as a fitness model. Through his contact to Ian Sitren (a photographer working for BodySpace), he has been able to get several photo shoots for bodybuilding magazines as well as support from a food supplement company that gives him products for free and professional advice to develop his physique further.

Chris does not rely on BodySpace for information, because he is very skilled and knowledgeable and has professional diet advice offline. He uses BodySpace to post his professional photos and to develop his relationships further to open up business opportunities, both with potential clients for his training business, as well as for further photo shoots. He gives some advice for free, but if people want further information he refers them from BodySpace to his personal website to inform them about the paid services available.

Chris was very supportive when I met him in California. Unfortunately, I did not hear back from Chris when I contacted him for a follow-up interview.

Francis

Francis writes on his BodySpace profile that he lives and breathes bodybuilding. He grew up in his father's gym, with his dad being the president of the national bodybuilding federation and his uncle being one of the most successful bodybuilders in his home country. The day after graduating from a sports science degree at university, he moved to California to become a professional bodybuilder. He has developed a friendship with former IFBB-pro Chris Cormier, a bodybuilding legend, with whom he trains. Francis competes mostly in Europe on an amateur level, but he makes a living as a guest poser, IFBB judge, personal trainer, and through bodybuilding workshops at gyms. He was also featured in several bodybuilding magazines, like Flex or Muscle & Fitness.

Francis is a writer for Bodybuilding.com and as such has also opened a BodySpace profile. He uses BodySpace mostly to help less experienced bodybuilders with advice, and as a contact medium for interactions with his (bodybuilding) friends, similar to MySpace.

Talking to Francis only on the phone, I found it difficult to have a conversation with him. He was friendly but busy, and I failed to make him reflect and explicate his knowledge—usually he finished his short statements with the phrase "you know what I mean?"

Francis talked about injuries, which is something I did not discuss with many other bodybuilders. Francis fractured one of the bones in his foot while lifting weights in the gym. Though he was walking on crutches, he continued to train for a an upcoming bodybuilding

competition. For the competition he left the crutches in the hotel and "put up a nice face" for the show.

Jeremy

Jeremy is a personal trainer and amateur bodybuilder in Los Angels. He has competed since his teenage years, he gave up his job as teacher to become a personal trainer, and he still competes in bodybuilding shows to keep motivated for the bodybuilding lifestyle, which keeps him healthy and young.

Jeremy did not just talk about the health benefits—he perfectly represented them. Looking at him at the age of 50, you start to realise the potentials of the bodybuilding lifestyle as a fountain of youth. He made clear that it does not come without sacrifices, such as the diet or the time and money that it takes, but he represented the benefits in a very positive way.

BodySpace is his social network of choice, because that is his interest. He uses it to post his progress photos and to keep track of his progress with statistics. He does not use BodySpace to get information, because he gets professional support from a diet coach (Tad the diet coach). He also uses other bodybuilding websites, like Flex Online to do research on supplements and to keep up to date with the news in the bodybuilding world. However, BodySpace has helped him to establish connections and to get appreciation from other people at his age, who admire his achievements. Since Jeremy is not proactively looking for contacts or leaving comments at other people's BodySpace profiles, he does not get too much feedback or motivation through BodySpace. He also does not use BodySpace for commercial purposes, because he already has a well-established clientele for his personal training business.

Jeremy said that he was happy that I chose bodybuilding as a research topic, because it is something that he loves. His wife recently completed her doctoral studies, so he knows how challenging the research process is. Personally, I felt very comfortable in the interviews with Jeremy, because I felt respected and he was able to reflect on his views on bodybuilding and BodySpace and made these thoughts explicit, sometimes in a slightly sarcastic way with a smile on his face.

Juliet

Juliet is a hard-working businesswoman and journalist living in Beverly Hills. She is in her forties and only recently started with the sport of figure in order to show that you can be in top shape at any age.

She strictly separates business, friends, and bodybuilding life offline as well as online. In her business people would find it weird to see her in bikini on stage. None of her friends is into figure or bodybuilding and they find the idea weird too. So none of them and neither of her kids came to her competitions. However, she has used BodySpace to make friends with whom she chats about the challenges of competing. At her first show she met many of those bodybuilding friends that she only knew by their BodySpace names. Since all of these figure competitors share the same passion but also feel isolated outside, they all help each other out at the show, and friends of other figure competitors also cheered her up in her show.

She also distinguishes between her business, friends, and bodybuilding "persona" online. She uses her professional website to communicate with business ties. BodySpace is purely for figure & bodybuilding friends (as well as another site called "SiouxCountry.com"). Facebook is a major medium to stay in touch with her friends. However, she has recently also posted some of her figure photos on Facebook to ease her friends into her new interest.

Juliet was very busy and we only had a short interview. However, the interview was very helpful because she was very reflective on the different views of bodybuilders vs. non-bodybuilders (especially because she only recently started with that lifestyle). She also was an advanced and very reflective user of websites and social network sites, being able to explicate her motivations for the orchestration of the different websites. Unfortunately, I did not hear back from her for my request for a follow-up interview.

Keith

Keith, a teacher in Los Angeles, works out at Gold's Gym, Venice, trained by IFBB pro-bodybuilder Will Harris. Keith has always been interested in weight training and bodybuilding, but he never managed to develop a habit of weight training and healthy diet. Under the supervision of Will he managed to transform his lifestyle without getting burnt out. Making improvements, he decided to compete in a bodybuilding show. However, the show put too much stress on him, and after the show Keith decided to give himself a break.

He has now returned to the gym and works again with Will Harris, however, with the goal to remain fit. He has remained a bodybuilding fan, but the dieting required in the preparation makes it too hard for him to compete again.

Keith started BodySpace, because it was another social network site like MySpace of Facebook, but with a focus on his interest bodybuilding. He uses it to chat with other bodybuilding enthusiasts and to share his experiences from Gold's Gym with others. However, having a strong support network in the gym, and having many other priorities in

his life (teaching, relationship, friends), he has not become hooked with BodySpace and only checks it every few weeks to see if somebody has left a comment.

Mark

Mark is a personal trainer and bodybuilder in his late 40's, who used to train with Mike Mentzer. (Mike Mentzer was supposed to win the Mr. Olympia in 1980, but Arnold Schwarzenegger made a surprise comeback and took away the title) Mark recently moved away from the 'Mecca of Bodybuilding', Southern California, to Nevada. He said that he is addicted to bodybuilding (in a positive way) and thus he also spends his holidays visiting bodybuilding competitions in other states. His fiancé joins him on these holidays and she also helps him backstage at competitions although she is not into bodybuilding.

Mark uses Bodybuilding.com, especially the forums, to get information. He said that competitive bodybuilders keep their information to themselves, but when they retire they like to share their knowledge and to inspire others. On BodySpace he mostly shows off his progress, and he contacts other people, mostly women, with comments about their progress and their looks.

Melvin

Melvin came across as a self-confident, always happy, always positive, and always hard working bodybuilder and personal trainer. Above all, he is keen to stick out and be someone special, in his personality, in his looks and in his actions. He enjoys looking good and the feedback he gets, and he proves his uniqueness through acts such as his posing routine in the bodybuilding show on Muscle Beach, where he performed a back flip on stage and won the best poser award.

He has a keen interest in developing his career further towards becoming a fitness model. Thus, we met late at night after him being in a 2-day workshop about fitness modelling including photo shoots.

Melvin is a keen networker, spreading business cards to any acquaintance that might help him to pursue his ambitions as a photo model. Similarly, he uses BodySpace and MySpace in order to put his photos out there and to establish connections that might help him to get a photo shoot or to find a sponsor. Ian Sitren, a photographer for BodySpace, recently rewarded him with a photo shoot and a feature article on his blog.

Melvin also uses BodySpace to support others and to chat with other competitors.

Nicole

Nicole is a mid-career researcher at a first-class university in Australia. She used to be a semi-professional ballet dancer until the birth of her first child. Not being able to spend enough time on dancing to further her career, she gave up that passion altogether to develop a new one by working out in the gym, which she sees as more time-efficient. She and her husband decided to compete in figure (and bodybuilding respectively) to set a goal for the new passion. Competing motivates her to eat very healthy, and she passes on that healthy lifestyle to her children. The children, a boy and a girl in their early teens, are both following the lead of their parents and have developed strong interests in weight lifting and ballet dancing respectively.

During the week Nicole works out at the university gym due to convenience. The people there are mostly students, who in her words "don't know what they are doing" and a few athletes in marathon and cycling that have a similar passion to hers. At the weekends she works out at a local gym, mainly used by "tradees" with a lot of experience in weight training.

Due to her job as a researcher she travels to the USA at least once a year. She uses the stopover in Los Angeles to work out in Gold's gym in between flights, and she expressed her excitement about that environment.

Nicole describes her fitness lifestyle as very time-consuming and her fitness competitions as something that is not understood at her workplace. Having few others friends who live a similar life she describes the passion of bodybuilding as very isolating.

BodySpace helps her to make contact with others who share the same passion. Nicole uses BodySpace to post photos, she is outgoing and posts comments on other people's profiles, Her interactions with BodySpace friends have remained purely online. Her husband only recently started to use BodySpace to search for advice for his first competition.

Nicole is very supportive despite the high demands of her job. She clearly enjoys talking about bodybuilding, since she says she has few people that can relate to it. She is very smart and reflective about bodybuilding from an inside perspective vs. the public's view, which is an indicator that she has developed a very advanced bodybuilding identity (that may lack only extensive social contacts).

Paul

Paul is a final year college student, who went into his first bodybuilding during the study. I interviewed him two weeks before the competition in great shape, saw him at the

competition on stage, and interviewed him 2 months later during his off-season. Following him over this period of time, I could see the changes in his physique as he leaned out and then how he gained weight and lost his shape again. Also his attitude towards bodybuilding changed in the mean time: His attitude towards achievement changed from wanting to be in great shape for himself into wanting to win a show. Furthermore, after the stresses of the preparation and competing he almost completely lost his excitement for training and dieting and went back to "partying and having fun". Seeing himself on the edited video from the first interview reminded him of the great shape that he lost and the attitude he had back then.

Before the competition he used BodySpace mostly to look for information and advice, to track his progress, and to get motivation and appreciation for his achievements in leaning out. He also posted photos and explicitly asked for critical feedback on BodySpace. However, none of the comments were critical and helped him to review his current status—they were all appraisal.

After the competition he used BodySpace and also Facebook mostly to stay in contact with various friends that he has made during the preparation and the competitions. Paul was very friendly and supportive. He mentioned that he felt honoured to be interviewed for this research and taken seriously as a bodybuilder although he was just a beginner. The interview also led to a feature of Paul in a newspaper article including a photo shoot.

Tim

Tim is an almost professional bodybuilder in his 40's. He failed to qualify for a pro-card this year, but will make an attempt again next year. He finances this expensive lifestyle (training, food, supplements, etc.) through his job as a registered nurse and his various enterprises. In a typical US entrepreneurial attitude he also earns money through personal training, as dietician and by trading food supplements, and he voluntarily works as a writer for Bodybuilding.com.

Through writing for bodybuilding,com he started his BodySpace profile, but it plays only a minor role for him. He uses BodySpace mainly to promote his achievements and his businesses. He has made some clients for diets through MySpace, which he uses in a similar way, but also to keep in touch with friends.

Tim has no real need for BodySpace, because he works out at Gold's Gym, Venice, and he is very well connected to the bodybuilding elite. In our conversation he mainly rolled out his bodybuilding life story from the beginnings as a teenage bodybuilder to all the friendships he made with the bodybuilding elite at Gold's and all the support he got throughout the years.

After the interview he showed me around Gold's and introduced me to some of his friends there, including former Mr. Olympia Jay Cutler.

Tim was very supportive and friendly, despite being very busy with all his jobs. He is working hard to get his pro-card and to create opportunities for making money through bodybuilding, such as personal training or photo shoots. He almost seems a bit driven, and despite his positively flavoured life story, I cannot get rid of the feeling that he still is looking for more and far from satisfied where he is now.

I interpret his support for my studies on the one hand as an attempt to pursue his quest for more success by trying to promote his name through a new channel. On the other hand I also think that he has a sincere interest in the sport and the bodybuilding community and does everything to support it, also because it seems to be almost all he has and stands for. Thus I think of Tim with deepest admiration but also with a hint of sadness.

Wendy

Wendy started to work out in the gym in order to lose weight for her wedding. She got inspired by a personal trainer, who showed her how to transform her lifestyle, and since then she has become a personal trainer and figure competitor in order inspire others as well. She only recently started her own personal training business, and is currently training 8 "girls" towards their first figure competition.

Similarly, she has evolved as a BodySpace user who initially used the social network to soak up information and advice from others, as well as feedback and appraisal. Now, being a personal trainer she has a profound knowledge about the fitness lifestyle, which she shares with others on BodySpace. She also makes her clients use BodySpace in order to blog about their progress and their emotional state in between the personal training session, so that Wendy can stay in touch with them online.

Wendy used the word "passion" repeatedly in both interviews to describe her motivation to live a lifestyle based on training and healthy nutrition and to inspire others to follow her example. She also made clear, that the passion inherits challenges, because other people do not eat in the same way and find it difficult to understand her motivations and values. Due to the preparation for her last show and she brought her body fat down to a very low level (below 12%) and as a result she has had to cope with health issues. Being asked if that's not obsession rather than passion, she answered that were she obsessed she would have kept doing the same activities, whereas she decided that health comes first and thus started to gain body fat again.

Appendix B.7   DVD with Sample Video Clips Used for Film Elicitation Interviews

The DVD attached below contains four video clips, which I edited for the film elicitation interviews during study 2. I recorded the first interview with each participant on video, and I edited two short video clips for each participant, each lasting between three and five minutes. One video clip described their bodybuilding careers, and the other video clip contained their views on BodySpace. I used these videos during follow-up interviews to elicit further reflection on these topics. This was referred to in this thesis on page 121.

Appendix B.8   Excerpts from Study 2 Interview Transcripts with Codes

The following samples of interview transcripts illustrate the kinds of questions I discussed during the interviews and the richness of the data from interviews carried out face-to-face and via telephone. I combined transcribing with the process of coding. Thus, the transcripts below also contain codes based on the analysis from study 1 and the memos and fieldnotes from study 2. They also contain comments like comparisons to other participants, open questions, and personal reflections. This was referred to in this thesis on page 121 and 123.

Excerpt from a face-to-face interview with Juliet

Transcript	Codes and comments
[…] *Are there people on BodySpace who provide you with more than just compliments?*	
Yeah, I've met a couple of people and I looked at their pages when I was first starting. I saw all their transformations, so of course I had questions and they were very, very helpful.	Career and SNS: informational support more important when you start
You meet a lot of people who live in your area and you meet actually at a show. So the first show I was in, I was "ohh, you are this person, Ohh you are that person". We knew each other by our BodySpace names. Even if you are a beginner and you go into a show, you already got a community of friends that you 've been corresponding with, and talking to and chatting with and offering hopes for months. So that's a really good thing and it was great to meet those women in person to see what they look like.	Career and SNS: for beginners to build up a community or network via BodySpace that you meet in a show.
How have these relationships that started on BodySpace developed?	
A couple of them I always see at shows. When they go to a show they text me, I text them. So we know who is doing what shows.	
And then like I just went to the Olympia. And one of them was working at a booth, and one was in the bikini contest. So I watch her do her little bikini show. And I went to visit the other one at	integrating online contacts with offline activities; easier to make contact with likeminded online first

the booth and we saw the Olympia Final together. So that's great, you build a network of people.	
I can't get my regular friends go to a figure show or to the Olympia. They would say, no way. So you need to have those people, and the best way to do it is through BodySpace or something where you are corresponding. And you have something in common, and it's that commonality that really links you.	problem that existing friends not interested in bodybuilding, when you are a beginner and don't come from a bodybuilding background. So you have to build up a community of bodybuilders, people who share your passion, when you start
I love bodybuilding, and actually some of the Pro bodybuilders I have as friends on my Facebook page or on MySpace. So I message them back and forth and just build these very informal friendships online. So "Saw you on stage at the and you looked great, bla bla" back and forth, you know?	community: friends with Pros—fandom, Jarvis Cocker article, what does it mean to be friends online? Exchanging appreciation, compliments for achievements; Facebook vs BodySpace, friendships on various levels online and offline (though friendship is not the core of the thesis)
You are not in contact with them on BodySpace?	
Some of them are [on BodySpace]. A lot of the Pros don't have that kind of access on BodySpace. More of them have MySpace pages or Facebook pages.	career and SNS: pros and advanced people not on SNS when they are all same level people and no control over privacy?? too much effort for them, too little in there for pros (other than building up a fan base)

Excerpt from a follow-up interview via telephone with Jeremy

Transcript	Codes and comments
[…] ***The first video is about the bodybuilding lifestyle. I think it shows nicely that bodybuilding plays into many aspects of your life—it's not just a spare time activity, it is your job, it is relevant to your relationships, to your wife.***	
Bodybuilding is a large part of your life and I was wondering, do you see somewhere a problem where you think it might become too big of a part of your life? Can you do too much bodybuilding?	boundary of passion and obsession [based on video]
I'm sure you could do too much of anything, and you start neglecting other aspects of your life, things that have to be done.	
You got to have the right balance. You still got to have a relationship with friends and family, and you still need to work your	

job, and you have to pay your bills, that's all things that you have to do.	
I think people get a little bit too obsessed when they work out too often and too long. And they don't go out to parties, and they don't go out, because they don't want to be around people that are drinking or eating bad food.	[he is talking about other people, but it also applies to himself]
Sure, you can take it too far and get so wrapped up in yourself that you are just no fun, you are no good to anybody.	
I try to be as dedicated as possible, but still stay open to doing some other things with other people, I try, but you got to be seriously dedicated though, without being obsessed, if you know what I'm saying.	boundary of commitment and sacrifice or obsession
This word obsession, that's a term I hear quite often—where do you draw this line between what is dedication and obsession? and I know this is very subjective.	
Are some people saying the same thing?	
I think everyone is different in how much you give up and sacrifice to get to the goal *you* want.	essence of Leidenschaft
Have you ever been in a situation where you thought afterwards you've taken it too far and need to find a different balance?	
Yeah, the pre-contest is so difficult. I cleared my schedule so that I wouldn't do anything [but prepare].	
But then when the show is over, you're back down, that's when the holidays came. My wife and I took off and went to Las Vegas for a couple of days, went wine tasting in California. So we just kind of let it go and rejuvenated and got back to something normal.	Off-season, less committed or strict; like with Paul, Wendy and Melvin—maybe a new theme for off-season activities and how they change
When you do that for a while then you are getting ready for the rigour of a competition, because it's good to be disciplined and on a regular schedule, and eating well, and exercising hard, because that feels good too.	cycles of commitment and enjoyment in passion
I can imagine, but going down to 4% body fat is difficult to imagine for non- bodybuilders.	
That's difficult. It's not really healthy, but you do it. It's just a moment to get you there.	bodybuilding not healthy
Right now I'm probably 10 or 11%, and that's fat for me. [...]	subjective body image / fat

Appendix B.9   Excerpt from a Study 2 Memo on BodySpace User Groups

The following document provides an excerpt from a 20-page long memo trying to unpack different kinds of user groups on BodySpace on a very fine level. This excerpt illustrates how I captured my observations and how I developed them into preliminary themes. This was referred to in this thesis on page 123.

Memo: BodySpace User Groups

Memo started on: Wednesday, December 17, 2008

Contents:

Introduction

Aim of this paper:

- Look at groups as defined by bodybuilders—**social world of bodybuilding**, fitness and BodySpace (rather than at passion)
- As Becker said in Art Worlds—also look at the **tensions of a group with others**, can learn much about needs by looking at tensions, frictions, problems
- **Who is on BodySpace?**
- **What do these groups gain online?** What is their motivation?—create *archetypes* (typical use cases—concept of "typical" / ideal user, as suggested in Ethnography book based on Weber's archetypes or was it Marx?)
- **What sort of passion do they pursue?** Are they even passionate? Or are they even obsessed?
- **Who is** part of the social world of bodybuilding or fitness **and is not on BodySpace or only minimally,** or not as active participant, or not at all?
  What do they gain? What are they missing on there?
- Why?
- Look at connections between groups
  - Who **is seeking for connections** with other groups?
  - Where are **tensions between groups?** (Becker said, look at the tensions, who is not satisfied with someone, always interesting)

Challenges:

- How to categorise people? by job, profession, or how they are motivated, or by stage in career?
- Often people have several roles, e.g., amateur bodybuilder and model and personal trainer

Categories study-participants used

Pre-study

Katrina (personal trainer in Sydney) mentioned 2 kinds of clientele in gym

1. **Star members:**
   - Relatively green, never used a gym before, need a lot support and motivation, usually intimidated by the gym itself

- o **Require extrinsic motivation:**
    - ▪ trainer needs do email or txt message the client to keep members on the ball: call them to come back to the training, usually a follow-up call within 24 hours
    - ▪ website for specific information
    - ▪ need a trainer to train in gym because they are new
    - ▪ outside gym need contact with trainer to do their exercises by themselves, stretches
  - o Some people have problem with money -> see trainer once a month, a lot of follow up per mail or phone assistance (training plans, questions, deal with obstacles, adaptations of plans, track their training)
  - o Chances are less to stay in the gym than compared to intrinsically motivated savvy members
2. **Savvy member:**
  - o Has experience in the gym, come to the gym and are happy to be left alone and train
  - o **Intrinsically motivated** members
  - o Have created a **habit / routine**

Study 2

Nicole about classification of people in gym / hierarchies:

- ▪ Competitive bodybuilders, know how to do training and nutrition right
- ▪ Trainers, know about fitness, but not much about bodybuilding
- ▪ Old guys / tradees (tradesmen like plumber) with self-taught training techniques, not competitors, have a lot of muscles but not best knowledge
- ▪ Young guys

Keith:

- ▪ "Bodybuilding has got so many different levels:
- ▪ There is the level of just living a healthy lifestyle and get in shape.
- ▪ I want to do a show and get excited about it.
- ▪ And then there is the extreme level of competitors that are on cycles of steroids all the time. They spend all their time in the gym. That's not really the type of person you see on BodySpace. That's I think is the type where you see a lot of psychologists talking about, people with a problem. "

Literature about bodybuilding groups

see document: SOTA bodybuilding

Klein (p48) discusses a pyramid from: gym pilgrims and onlookers; members: gym rats (big, but not competing) and amateurs; professionals; organisers and magazine owners (Weider_

-> I think supplement companies not included -> probably in chapter 4 about power

-> No distinction between natural and enhanced bodybuilders (no issue at that time)

Fussell: also distinguishes between 2 groups in gym: gym rats (stay in cardio and around machines) and bodybuilders (at weights, loud and dominant demeanour)

Hotten: hidden in articles
- e.g., Mr. Universe who hopes for money

Louie Theroux:
- brings up the male muscle groupies—nerds that have a fetish for female bodybuilders

Monaghan:
- bodybuilders vs. weight lifting (Monaghan, 2001) p.29
  bodybuilders: aim to improve physical appearance (bodily display)
  weight lifting: aim to lift maximal weight (bodily performance)

Groups active on BodySpace
(Commonalities between all groups on BodySpace)

Andy said in interview 2 that with all people he interacted with on BodySpace he had some commonality, which is that it is always about **being healthy and fit**

- it's not just to sell stuff (commercial)
- it's not just to be social

Recreational gym goers (Beginners, extrinsically motivated)

Archetype, definition, characteristics and examples:
- after injury
- lose weight
- women after pregnancy
- often extrinsically motivated, by a personal trainer or a friend, …

Passion:
- not passionate in sense that they do everything to realize their potentials
- may be excited and initially passionate, but just at the beginning of potentially forming a passion
- would rather fit in all of the middle stages of TTM (after contemplation, maybe even last stage that they do it for long time, but before creating a habit/routine)

Passionate?
- Like bodybuilding: no, may find it weird
- Perform in bodybuilding (competitions): no
- Identify with bodybuilding: no

Needs:
- information how to train right
- motivation to go to gym regularly

Seek connections to:
- other beginners, share problems, find connections / friends

- people who help them with advice

Value of BodySpace:
- very valuable, gain motivation, find others who are similar or role models, can show achievements, get information
- post progress pictures—makes you feel responsible: I think Juliet and Wendy demanded that of their clients

Recreational gym goers (Habitual, intrinsically motivated)

people who do it to stay fit, who have created a routine; intrinsically motivated

Value of BodySpace: similar to above, maybe gain more sophisticated knowledge and reaffirm their values / why they go to gym - > see also motivation of gym use paper (Crossley, 2006)

Passionate?
- Like bodybuilding: no
- Perform in bodybuilding (competitions): no
- Identify with bodybuilding: no

Athletes in other sports

Similar to recreational gym goers, also intrinsically motivated, e.g., marathon runners, track & field athletes, ball sports

Use gym to enhance their fitness and may do it as routine

Use BodySpace as a tool mainly I would guess

Passionate?
- Like bodybuilding: probably no
- Perform in bodybuilding (competitions): no, have other sports where they compete, but apply bodybuilding knowledge in weight training and diet
- Identify with bodybuilding: don't think so, see themselves as football player, athlete, …

Example: participant in pre-study, athlete, lives like a bodybuilder in terms of diet and training, also goes to shows, but does not engage in training for bodybuilding competition but for athletics.

Gym junkies

More than just a regular gym goer; someone who goes to gym regularly and lives similar to a bodybuilder; looks big, may also be a fan of bodybuilding, but who does NOT compete (and therefore does not qualify as a bodybuilder)

[…]

Appendix B.10   Establishing Relationships between Variables in Coding during Study 2

The most difficult part in the analysis of study 2 was to establish the relationship between the career stage of participants and their participation in BodySpace. During the first round of coding I extended and refined the themes from study 1that describe participation in BodySpace. The following screen shots illustrate the procedure to establish patterns in the data that describe the participation in BodySpace for groups of users at different stages at their careers. This was being referred on page 124.

1) The screenshot below illustrates how I prepared the so-called 'case properties' in NVivo. In my use of NVivo, each participant constituted a case with properties like age, the number of comments posted on BodySpace, or the stage of their bodybuilding career. The following screenshot shows the properties of Andy, personal trainer and a professional competitor with Mr. Olympia aspirations, who I classified as career stage 4—aspiring celebrity.
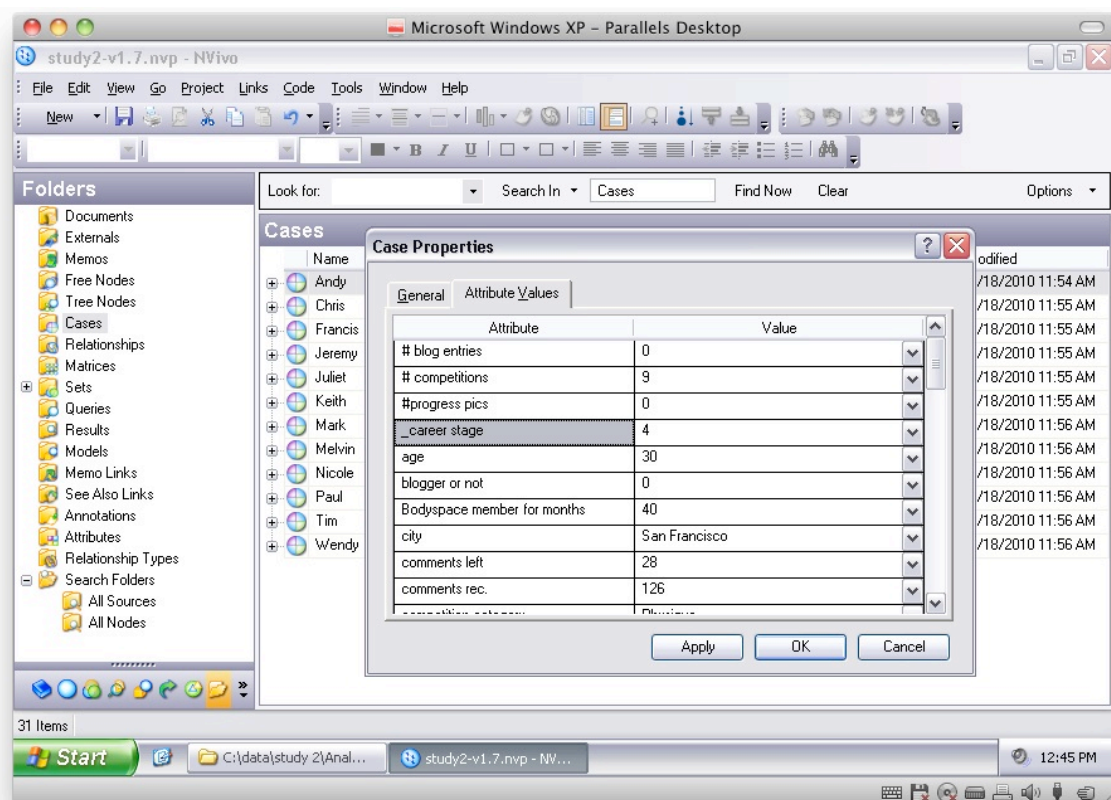
2) I used matrix queries in NVivo to compare data coded with the same themes between different career stages. The screenshot below illustrates the matrix that consists of the different career stages from beginner (1) to aspiring celebrity (4), combined with the codes of progress monitoring, knowledge sharing, and comparisons under the tool theme. The cells show the frequency of these codes for the different career stages. For example, the highlighted cell shows that knowledge was identified three times in the data associated with people at the stage of aspiring celebrity (4). The frequencies in the cells are linked to the actual data, as illustrated in the third (and final) screenshot.
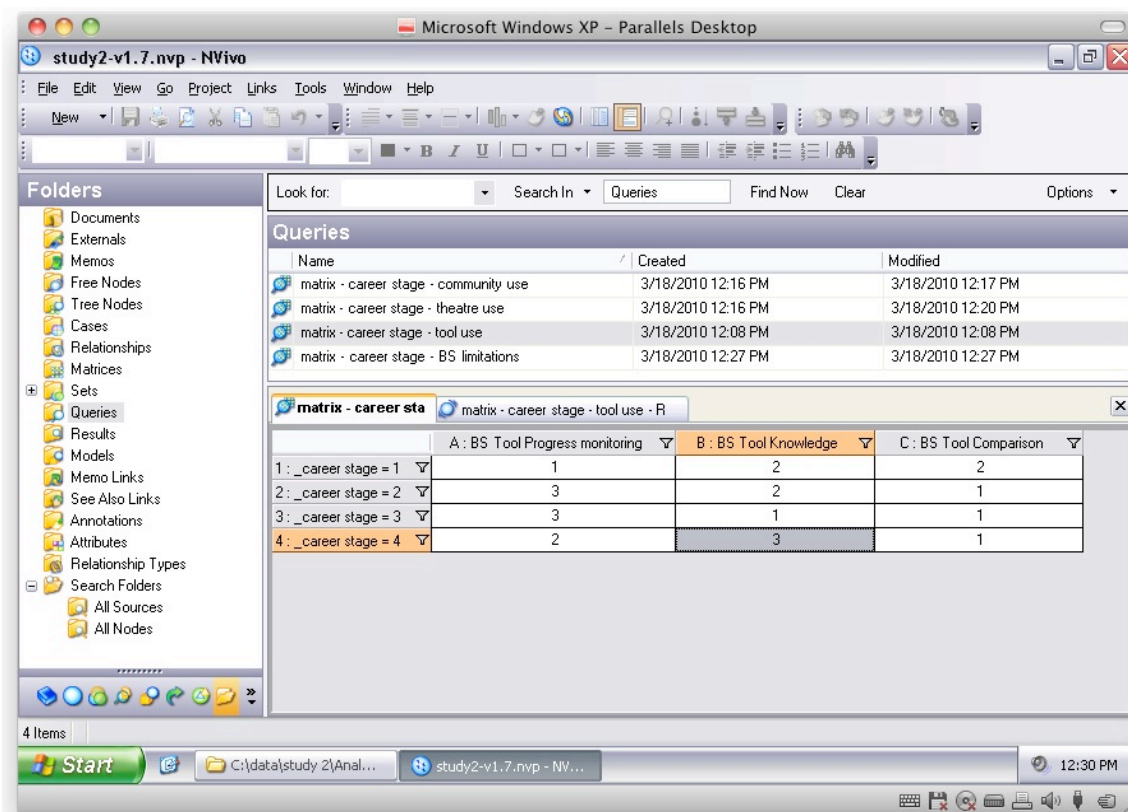

3) The final screenshot (see next page) shows an excerpt of the data associated with 'aspiring celebrities' and coded with 'knowledge sharing'. The data presented here shows that the information presented in the matrix queries are only partially useful. The data points to aspiring celebrities, but it is actually a discussion of how beginners (rather than aspiring celebrities) share knowledge on BodySpace. Thus, I critically examined all data in the matrix queries and refined my codes:

- I added codes for discussions of particular groups on BodySpace, regardless of the career stage of the study participant. For example, the code 'BS UG 1 amateur

beginners' contains data referring to participation in BodySpace (BS) by the user group (UG) of beginners (stage 1).

- I also added codes for discussions of celebrities. As discussed in chapter 5, many participants referred to celebrities, but I did not actually interview celebrities during my fieldwork. Thus, I relied on interview accounts from other participants and online data from celebrities, which I coded as 'BS UG 4 celebrity in bb' (BodySpace user group stage 4, celebrities in bodybuilding).

- I coded data that supported trends in online participation that emerged during the fieldwork and earlier phases of the analysis, like the shift from online participation to participation in other settings offline when bodybuilders progress in their careers (code 'BS UG Trend—Participation shifts away from BS during career').

The findings presented in chapter 5 are based on a combination of matrix queries, additional codes for discussions of career-related BodySpace use, and codes for trends in the data.
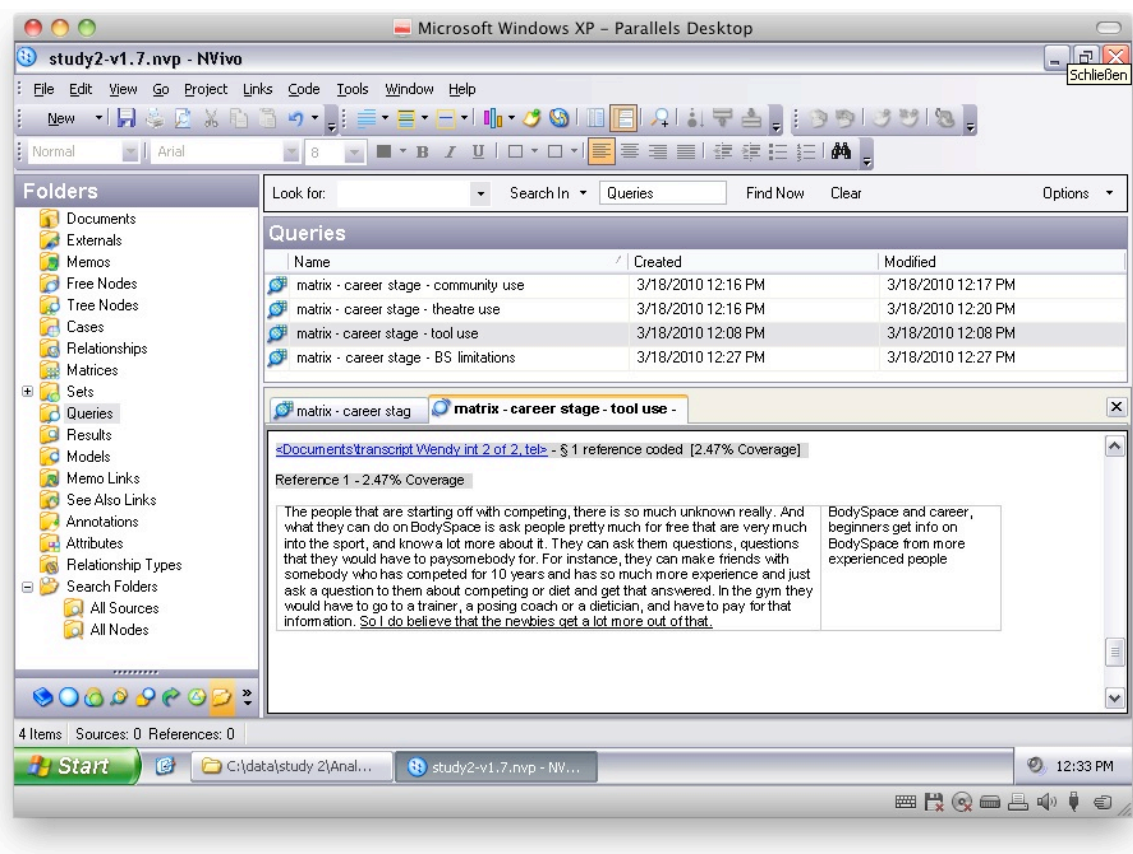
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Appendix C

Material for Study 3

The documents in appendix C provide details on the data collection and analysis of study 3 in order to make the research process transparent and auditable. The documents listed in this appendix were referred to in chapter 6 of this thesis.

Appendix C.1   Review of Existing Passion-Centric Social Network Sites between Study 2 and Study 3

The aim of study 3 was to apply the findings from study 1 and study 2 to a passion-centric social network site where users have also offline connections with one another. The setting I chose was Flickr with the passion of photography, because it had the highest ranking in terms of likely offline connections and it provided me with access to potential study participants in Melbourne.

To get to this result, I compiled a list of passions and passion-centric social network sites as possible settings throughout study 2. I generated this list through discussions with colleagues and other researchers in public presentations and more informal settings. I added references to passion-centric social network sites in the literature and on other websites to the list, and I visited magazine stores to explore the range of activities represented by magazines for different interests, hobbies and passions.

The resulting list below represents only those passions for which I could also find a passion-centric social network site. Between study 2 and study 3 I spent two weeks where I visited these websites regularly and tried to assess the activity levels and the kinds of relationships based on the contents of online discussions, FAQ's, articles and blogs about these websites as well scientific literature. The list is sorted after the likelihood that users of the passion-centric social network site also have offline contact, starting with very low likelihood like on BodySpace, and ending with rather high likelihood, as on Flickr.

My initial assumption was that team sports would be a useful choice since they require offline ties. However, my search indicated that team sports like volleyball rarely had active passion-centric social network sites, possibly because achievements of a team member are difficult to represent in an individual online profile. Furthermore, passions with a clear visual or audible result or object of passion (e.g., sports cars) seem to facilitate more online activities than those that rely on more transient achievements like in running or ball sports.

Thus, my conclusion in these observations was that the most suitable candidate for study 3 would be a passion with a clearly visible or audible outcome, one that is facilitated by a club, institution or some form of offline group that ensures that members have offline ties. At the same time, the activity needs to be an individual activity to ensure that each user has clear personal benefits from his or her online participation. Only the passion-centric social network site MyChurch, a social network site that connects members of a church, and Flickr fulfilled the criteria of high activity and high likelihood of offline ties. However, the visible

or audible outcome in MyChurch was not clearly defined (and the term passion would have received a different meaning). Furthermore the website MyChurch is mainly used in the USA, which would have limited my empirical work to online observations and telephone interviews only. Thus I decided to study Flickr, even though the sacrifices in the passion of photography were initially less obvious to me than in bodybuilding.

This review process was referred to in this thesis on page 173.

Passion	Websites	Web activity 1 high; 3 low	Strangers only? 1 high; 5 low	Comments about connections with strangers or offline ties	Accessibility: 1 high; 5 low
Models	Model Mayhem http://www.freelancemodels.com/	2	1	connect with strangers	4
Fandom, e.g., Hasselhoff	Hoffspace	2	1	connect with strangers	4
Online dating	Friendster, www.datingdna.com, rsvp, & many more	2	1	connect with strangers	3
Wrestling	http://fans.wwe.com/ ; http://www.wrestlecommunity.com	3	1	connect with strangers	4
Collectors	http://www.myphilately.com/; http://sportscollectorsdaily.ning.com/	3	1	connect with strangers	3
Vampire fans	Vampire Freaks.com; (Mellins, 2008)	2	2		4
Martial arts	http://bluewavetkd.ning.com/ on Ning (for New England)	3	2		3
Skydiving	http://skydivernetwork.ning.com/	3	2		4
Magicians	http://www.mymagiczone.com/ (official organisation would be http://www.magician.org/ http://www.mrtricks.com.au/IBM/)	3	2		3
Marathon runners, triathletes	http://www.athlinks.com/ http://triathlon.loopd.com/Members/LoopdTriathlon/Default.aspx for triathletes (http://www.tri-bal.com.au/ for triathlon in Melb)	2	2	mostly about connecting, but also has clubs on athlinks with pre-established networks, buthe first group of triathletes had only 1 member)	3

Passion	*Websites*	*Web activity 1 high; 3 low*	*Strangers only? 1 high; 5 low*	*Comments about connections with strangers or offline ties*	*Accessibility: 1 high; 5 low*
Music bands	MySpace, ReverbNation.com	1	**2**	connect with strangers (bands with fans)	3
Boxing	http://www.myboxingnetwork.com/; http://boxingsocialnetwork.ning.com/; http://www.boxing-network.com/	3	**2**	connect with strangers mostly	3
Car enthusiasts	motortopia.com; http://www.cardomain.com/; Zoopedup http://www.dropacar.com/ My Own Car Show • VehicleVoice • CarSpace • Classic Motorsports Community • Zoopedup Cyber Garages MyRide.com	3	**2**	connect with strangers mostly	2
Artists	DeviantArt; http://www.myartspace.com/; http://www.artmesh.org/; http://www.taltopia.com/	1	**2**	connect with strangers mostly	3
Climbing	• SNSs? maybe http://www.yourclimbing.com/ EveryTrail for mountaineers, hikers; http://www.climbing-network.com/	3	**2**	connect with strangers mostly	3
Mountaineer	everytrail.com; to do	3	**2**	connect with strangers mostly	4
Open Source Software developers	CNET; My developerWorks (IBM), though not just open source but also IT professionals	3	**2**	connect with strangers mostly	3
Surfing	http://surf.loopd.com/Members/LoopdSurf/Default.aspx; http://uksurferspace.ning.com/; http://surfmondial.ning.com/; Surf Buds	3	**2**	connect with strangers mostly	2
Motor bikes	Motocross fans http://motocross.com/index.html see http://hubpages.com/hub/Social-Networks-and-Forums-for-Bikers for overview	3	**2**	could not find a an active passion-centric social network site, mostly for networking rather than friends	1

Passion	Websites	Web activity 1 high; 3 low	Strangers only? 1 high; 5 low	Comments about connections with strangers or offline ties	Access ibility: 1 high; 5 low
Skiing	http://www.loopd.com/ http://www.skinet.com/community? http://www.skispace.com/ by Body Miller	3	2	connect with strangers mostly	3
Snow-boarding	http://snowboard.loopd.com/ http://www.snowtwosix.com/ • though they have a weird mix of snowboard videos etc, but also a focus on party and sexy girls • runs on NING	3	2	connect with strangers mostly	3
Environmentalists, sustainable living	Care2; http://www.green-heroes.org/ (on Ning); http://www.netsquared.org/ more a blog but also groups on Facebook, LinkedIn, …	2	2	care2 and ning are for networking	
Skate-boarding	http://www.interstatenation.com/ http://skateboarders.skateboards.com/ http://www.skate-network.com/	2	2	probably more for strangers	
Cycling (recreational to competitive)	http://www.athlinks.com/ http://roadcycling.loopd.com/Members/LoopdRoadCycling/Default.aspx for road cyclists http://velospace.org/node http://www.meandmybicycle.com/	3	2	all to connect with strangers;	1
Music listeners & fans	last.fm; MOG; buzznet	1	2	last.fm is probably more about the content, finding new music and others with similar music, rather than to connect with offline friends	1
Fishing	http://www.bountyfishing.com/	1	2	connect with strangers mostly	2
Hiking	everytrail.com; to do	3	2	connect with strangers mostly	2
Poker	www.pkr.com; http://www.pokerspace.com/ (some not so good ones http://www.propokerspace.com/ http://www.mywaypoker.com	2	2	connect with strangers mostly	3

Passion	*Websites*	*Web activity 1 high; 3 low*	*Strangers only? 1 high; 5 low*	*Comments about connections with strangers or offline ties*	*Accessibility: 1 high; 5 low*
Gardening	http://myfolia.com/countries/12/view; http://www.gardenbook.com.au/ looks great and has all I need in Australia but is not launched yet; http://www.gardening-network.com/ is an international network but looks a bit dead,	2	2	folia looks nice, and maybe people connect with others in their area, but it's not per se about offline networks; www.gardening-network.com/ is more for strangers to network	2
Books, reading	http://webtrends.about.com/od/socialnetworks/tp/book-social-network-list.htm • Goodreads • Shelfari; LibraryThing • http://www.bookcrossing.com/	1	2	shelfari and goodread scan my gmail, Facebook etc. for offline ties but primarily networking; both seem to be useful tools for oneself to keep lists and to explore more interesting books, not so social for offline networks	1
Films, watching	Flixster	2	2		1
Pets	Catster & Dogster (his sites), Cats in Sinks, Cats that look like Hitler, CuteOverload photos of cute things, pets	1	2		1
Fashion, shopping & lifestyle	fabsugar, about Fashion, Shopping & Style; OnSugar	2	2		2
Investors & stock markets	http://www.socialpicks.com/	3	2		3
Mountain biking	• YourMTB.com mountain biking • http://mtb.loopd.com/ http://velospace.org/node	2	2	http://www.yourmtb.com/ looks like web 1.0 but at least its got a map feature and lets you find people in your area; loopd looks funky but has no exciting tools I think	2
Fitness training, losing weight	BodySpace	1	2	BodySpace mostly used for strangers	2

Passion	Websites	Web activity 1 high; 3 low	Strangers only? 1 high; 5 low	Comments about connections with strangers or offline ties	Accessibility: 1 high; 5 low
TV watching	Hulu (US and UK I think only), Boxee and TV.com	1	2	probably both, friends and like-minded	
PhD	http://www.myphdnetwork.org/	3	2	probably more for strangers	
Graffiti	DeviantArt, Flickr, stencilrevolution (forum only), Ning	3	3	tightly knit scene in melbourne (stencilrev, maybe also flickr) but also to connect with strangers (DeviantArt is mostly strangers)	2
Lomo-graphy	flickr	1	3	Flickr is both, friends and strangers	3
Sports fans	Fan IQ: fans of all major sports in the US http://footyheads.com.au/ australian rules	3	3	both, friends and strangers	1
Lacrosse	Laxspot	3	3	both, teammates and strangers	
Dancing, e.g., Ballet, Ballroom, …	The Winger's (Inter)Mission, Movmnt.net (on Ning), http://www.danceruniverse.com/; http://dancetech.ning.com/	3	3	probably both, friends and like-minded, but more strangers	
Running, recreational to competitive	http://nikeplus.nike.com/nikeplus/ or at http://www.runnerplus.com/	3	3	both, fellow runners and strangers	1
Craftsmen-ship, e.g., knife makers	• Craftster.org • Ravelry (for knitting and crocheting)	1	3	about strangers, but there are also local clubs like the one in Melbourne	2
Lace making, knitting, crocheting, …	Ravelry, with yahoo group for offline meetings	1	3	about strangers, but there are also local clubs like the one in Melbourne	2
Recreational sports	http://sportsvite.com/ or meetup.com	1	3	both, friends and strangers	1

Passion	Websites	Web activity 1 high; 3 low	Strangers only? 1 high; 5 low	Comments about connections with strangers or offline ties	Accessibility: 1 high; 5 low
Chess	chess.com	1	3	probably both, friends and like-minded; club at Melbourne uni	
BDSM	http://fetlife.com/	2	4	both, friends, partners, and other ties as well as to meet new people	3
humanitarian activities; e.g., Amnesty International	http://www.amnesty.org.au/ & http://www.facebook.com/group.php?sid=fefcde256b1606b8dbee5c78af30342d&gid=10630441780&ref=search	3	4	Facebook group is more for offline ties	4
Photography	dphoto, Flickr melbourne group;	1	5	flickr and photosharing in general should be more between friends and family members, but also to show to public	1
Spirituality / Religion	MyChurch	3	5	to connect the members of a particular church community	4

Appendix C.2   Plain Language Description for Study 3

The following document provides a plain language description of study 3 for the participants. It was part of an application to the Information Systems Human Ethics Advisory Group to approve this research and contains the reference number used by the University of Melbourne. This document was referred to in this thesis on page 179.

THE UNIVERSITY OF MELBOURNE DEPARTMENT OF INFORMATION SYSTEMS Research Project Description (Plain Language Statement)		
PROJECT TITLE:	**SOCIAL NETWORK SITES AND PHOTOGRAPHY**	
INVESTIGATORS:	Mr. Bernd Ploderer (berndp@pgrad.unimelb.edu.au) A/Prof. Steve Howard (showard@unimelb.edu.au) Prof. Peter Thomas (petert@unimelb.edu.au)	
STUDY LEVEL:	Ph.D.	

What is the purpose of the project?

The purpose of this project is to conduct research on the use of social network sites for photography. We are interested in activities that take place on social network sites like Flickr and other photo sharing websites, as well as in activities in everyday life.

Why and how was I selected?

We invite you to participate in the research project because of your active membership on the website Flickr. We found your profile using the search on Flickr and we used the website's contact form to write to you.

What will I be asked to do?

If you agree to take part we ask you to participate in three tasks:

- Two interviews: We will meet for two interviews where we will ask you questions about your photography-related activities, your use of social network sites, and how the two relate. We may take photographs, record video or audio, and take notes of what we talk about. The interviews will be carried out at a time and place of your choice and last between 45 and 60 minutes.

- Photo task: We plan to use photos to raise discussion during the interviews. Thus we may also ask you to take photos to specific topics and to upload them on Flickr. We may collect these photos and other publicly available data from Flickr and other websites that you may use for your photographs for discussion in the interviews and for our analysis. We estimate that taking and uploading these photos will take you no longer than 60 minutes.

How will the data be used?

This study will form part of Mr. Ploderer's Ph.D. thesis. Once the thesis has been completed, a brief summary of the findings will be available to you on application at the Department of Information Systems. The results may also be written up in the form of reports to be presented at conferences and published in academic journals. Presentations may contain photos or videos if explicit agreement is expressed. The outcomes will also have practical

implications for the design and development of new technologies that help people to pursue their interests, may it be artwork, sports, or travelling.

How will my confidentiality be protected?

We intend to protect your anonymity and the confidentiality of your responses to the fullest possible extent, within the limits of the law. Due to the small number of participants there is a possibility that people could be identified by contextual information. To preserve your anonymity, we will use code names for participants in all written work. No individual person will be identifiable in written reports or audiovisual material without the expressed agreement of the individuals concerned.

As required by the University, data gathered as a result of this project will be held in locked cabinets in the Department of Information Systems, and destroyed using confidential waste disposal techniques five years after the date of last publication of results arising from this research.

Will participation prejudice me in any way?

The project does not involve any recognisable risks to participants. Please be advised that your participation in this study is completely voluntary. Should you wish to withdraw at any stage, or to withdraw any unprocessed data you have supplied, you are free to do so without prejudice.

The researchers are not involved in the development of the website Flickr or any other website. Your decision to participate or not, or to withdraw, will have no effect on the usage of any websites.

Why should I participate?

You will receive a voucher for a 1-year Flickr Pro account (value: USD 24.95) to acknowledge your contribution. The voucher will either extend the Pro status of your Flickr account for another year, or update your free Flickr account to a Pro account for that period. Alternatively, we can offer you a voucher for AUD 25 for the online shop Digital Camera Warehouse. We know that your time is limited and valuable and that we can offer you very little in return for your help, but your support will make a great contribution to the work of a Ph.D. student.

Where can I get further information?

Should you require any further information, or have any concerns, please do not hesitate to contact Mr. Bernd Ploderer on +61 4 1553 9598 or b.ploderer@pgrad.unimelb.edu.au. Should you have any concerns about the conduct of the project, you are welcome to contact the Executive Officer, Human Research Ethics, The University of Melbourne, on ph: +61 3 8344 2073, or fax: +61 3 9347 6739.

How do I agree to participate?

If you would like to participate, please indicate in the email reply to b.ploderer@pgrad.unimelb.edu.au that you have read and understood this information and agree to the accompanying consent form. The researchers will then contact you to arrange a mutually convenient time for a first meeting.

<div align="center">

Thank you for your support.

</div>

Appendix C.3   Sample Interview Questions for Study 3

The following document lists sample interview questions for study 3. These preliminary questions were part of an application to the Information Systems Human Ethics Advisory Group to approve the research at the University of Melbourne. I further refined these questions as I developed a better understanding of the setting. This was referred to in this thesis on page 179 and 182.

PROJECT TITLE: Social Network Sites and Photography

All interviews will be semi-structured, using an interview guide with a set of predetermined questions, but also allow freedom to elaborate issues as they emerge in the conversation.

The questions presented here are informed by themes emerging in our first study. These questions represent an indicative pool of potential questions to be asked of the participants. The questions will be adapted according to the individual circumstances and findings that emerge over the series of interviews.

Indicative interview questions

General information

Photography in general

1.   Could you tell me more about your most recent photos?

2.   How much time per week do you spend with taking, editing, or distributing photos?

3.   Where do you get your inspiration for your work? Do you have a photographer or artist whose work has inspired yours?

4.   What are your plans for the future? Where do you see yourself in 3 or 5 years?

5.   Is there anyone who helps you with your work in any way?

6.   Who do you show your photos to?

7.   Do you meet other photographers? If so, where, when, how often?

8.   Do you have any form of "traditional" education in photography?

9.   Could you tell me how you started taking photos?

10.   What is your favourite photo? Could you tell me more about it?

11.   What makes a good photo for you? Could you show me an example?

12.   What has been your greatest achievement, your greatest photo, or your greatest moment in your career?

13.   Have you ever presented your photos publicly, e.g., in an exhibition?

14.   Have you ever sold any of your work?

15.   Do you pursue a professional career in the scene? Does Flickr help to get jobs?

16.   What is the most challenging thing about photography?

The research project

17.   Do you have any questions or comments for us about the project and about what we are trying to achieve?

18.   Do you have any comments on what you want us to achieve with our research?

19.   Do you have any thoughts about aspects that are important to understand your artwork and your use of Flickr, which we have not talked about?

Websites in general

20.   Which websites do you use for your photos? How do you use them? How often do you use them?

21.   Where do you use the Internet—at home, at work, on your mobile…?

22.   How much time do you think you spend online per day/week? How often do you log on to the system?

23.   What do you usually do when you log on to Flickr?

24.   What does the website offer you that you can't get elsewhere (offline)? What would happen when Flickr would decide to go offline tomorrow?

25.   When did you join Flickr? How did you find out about it?

26.   What's the best thing about Flickr? What's the worst thing? What could be improved on Flickr?

27.   Do you pay to have the "pro" service on Flickr? Why (not)?

Community aspects

Social relationships to peers and social support

28.   Who do you show your photos to? Who looks at your photos on Flickr?

29.   Do you have friends that are also into photography? Are you a member of a club? Could you tell me more about them? How often do you meet them?

30.   Who helps you with your photos, e.g., when you have questions or problems or when you want to buy new equipment?

31.   Could you tell me more about other people who were involved in your career? What did you learn from them?   How did they support, influence or inspire you?

32.   What type of people do you meet on Flickr?

33.   What type of people are you looking for on Flickr? Is there a group of people missing on Flickr?

34.   When you interact with other people on Flickr, what type of emails, comments and responses do you get?

35.   Do you have people on Flickr with whom you interact more often or regularly? Could you tell me more about them?

36.   How do you decide whether you add someone as a friend on Flickr?

37.   Have you met people online who you also meet in real life?

38.   Have you had any difficulties, misunderstandings or conflicts with other people on Flickr?

Self-presentation aspects

Online Interaction and self-presentation

39.   Are there any "celebrities" on Flickr? Could you tell me more about them? How did they get famous?

40.   I have a printed copy of your Flickr profile with me. Could we go through it and could you tell me what it means for you?

- Where does your username come from? Could you tell me how you chose your avatar picture?

- What are your 3 favourite website features? How do you use them? Which website features do you consider unnecessary? Would you like to have any features added that are not yet available? (How) does the website help you with bodybuilding / keep motivated?

- What type of emails, comments and responses do you get from Flickr? What kind of positively surprising messages did you receive? Have you received any negative, surprising, shocking messages?

41.   Have you ever asked someone on Flickr for critique or feedback? What was the response? What sort of feedback or comments do you usually get on Flickr?

42.   Do you use other social network site like MySpace, Facebook, Red Bubble or DeviantArt? If yes, for which purposes? What's the difference between those social network sites and Flickr?

Tool aspects

Goals

43.   Could you tell me more about the challenges involved in becoming a photographer? What's the most challenging thing?

44.   What is your current goal? What do you want to achieve in the next 3 weeks, 3 months, 1 year, in 3 years?

45.   Do you have any advice for beginners?

Flickr as a tool

46.   What sort of information do you find online, e.g., on Flickr?

47.   Who do you ask for advice or information?

48.   How do you judge the quality of advice or information you get from others (online)?

49.   How do you judge another person's experience and skills on Flickr?

Appendix C.4   Study 3 Website

The following screenshot shows the website used to describe the aims of study 3. It links to the plain language statement and the consent form and provides my contact details together with contact details to my supervisors and the University of Melbourne's Human Research Ethics Committee. The website was online on http://disweb.dis.unimelb.edu.au/student/rhd/berndp/photo-study/ for the entire duration of study 3. This was referred to in this thesis on page 179.

Social Network Sites and Photography

THE UNIVERSITY OF MELBOURNE

A PhD-level study at the Department of Information Systems, The University of Melbourne, Australia

About the study:

What is the purpose of this study?

The purpose of this study is to conduct research on the use of social network sites for photography. We are interested in activities that take place on social network sites like Flickr and other photo sharing websites, as well as in activities in everyday life.

What will I be asked to do?

If you agree to take part we ask you to participate in two interviews, each lasting between 45 and 60 minutes. For discussion in the second interview we may also ask you to bring along photos to specific topics. Taking these photos or selecting photos from your collection should last no longer than 60 minutes.

Why should I participate?

You will receive a voucher for a 1-year Flickr Pro account (value: USD 24.95) to acknowledge your contribution. The voucher will either extend the Pro status of your Flickr account for another year, or update your free Flickr account to a Pro account for that period. Alternatively, we can offer you a voucher for AUD 25 for the online shop Digital Camera Warehouse.

We know that your time is limited and valuable and that we can offer you very little in return for your help, but your support will make a great contribution to my Ph.D. thesis.

How can I participate?

Please send an email to b.ploderer [at] pgrad.unimelb.edu.au stating that you are interested to participate in this study. We will get in contact with you as soon as possible to negotiate a meeting.

Thank you for your support!

Bernd Ploderer

Contact & further information:

Further information about this study can be obtained from the plain language statement (PDF) and the consent form (PDF).

If you have any questions or want to participate please contact:

Mr. Bernd Ploderer
(Student Researcher – Primary Contact)
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Tel: +61 3 8344 1554
Mob: +61 4 1553 9598
Fax: +61 3 9349 4596
www: http://disweb.dis.unimelb.edu.au/student/rhd/berndp/

Prof. Steve Howard
(Responsible Researcher)
showard [at] unimelb.edu.au

Prof. Peter Thomas
(Co-Researcher)
petert [at] unimelb.edu.au

Appendix C.5   Excerpt from Study 3 Online Data Captured in ScrapBook

The following screenshot illustrates the clusters of online data collected during study 3. I used the Firefox add-on ScrapBook, which creates a library of websites stored locally on the computer. The screenshot shows the ScrapBook library on the left, and a photo of two Analogue Photography Club members on Flickr on the right. This was referred to in this thesis on page 180.
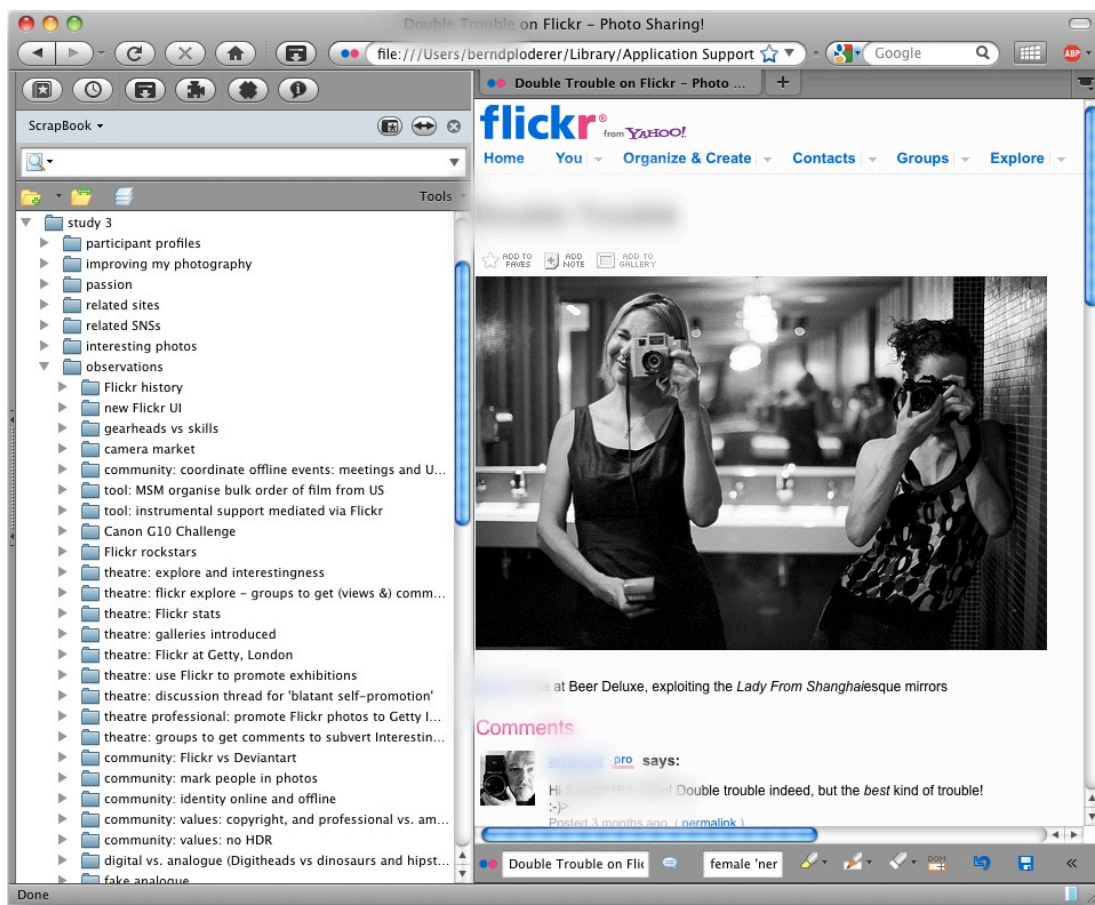
Appendix C.6   Excerpt from Fieldnotes from a Visit to a Camera Market

The following excerpt illustrates how I captured my observations at photography-related events in fieldnotes. The fieldnotes below contain my observations and conversations during a visit to a camera market as well as related online discussions on the APC Flickr group. I anonymised the contents from Flickr to protect the privacy of the participants. This was referred to in this thesis on page 181.

Fieldnotes: Box Hill Camera Market

Date: 21 March 2010; Location: Box Hill Town Hall, 1022 Whitehorse Road, Box Hill

I went to the camera market of the AUSTRALIAN PHOTOGRAPHIC COLLECTORS' SOCIETY, held in the town hall in Box Hill.

From http://www.apcsociety.com.au/market.html

> *Our Photographic Markets are the largest in Australia. Held twice each year they are not just a swap meet for collectors, but a true mix of old and new. Antique Camera & Image dealers rub shoulders with Photographic retailers and private dealers, still, movie & video. Truly daguerreotype to digital. An invaluable source for students after cameras and darkroom gear, a great deal of new and used equipment becomes available all in one place. Many professional photographers sell their excess or out-dated equipment, making professional 35mm and medium format cameras affordable for users and collectors.*
>
> *Our next Market will be at the Box Hill Town Hall on March 21st 2010 from 9:00am to 1:00pm. The Box Hill Town Hall is at 1022 Whitehorse Road, Box Hill, just East of Station Street at the end of the shopping centre. Due to better financial arrangements we are able to reduce admission to just $2. Don't miss it!"*

Introduction

Aim of this visit to the market:

- the camera market was mentioned by several APC members as shared activity, where they met, bought and sold cameras, had their own stall; this year the stall was organised by Diane -> see Flickr thread in this document

- observe 'photoheads' / 'gearheads'

- take photos of vintage cameras for thesis

- personal interest: buy stuff (I don't need): TLR (Rolleiflex), tripod, scanner

About my personal feelings:

- I felt very excited about going to the market, and I felt tempted to buy a camera, even though I knew I don't have time and I don't use my other film camera as much as I would like to (and I hardly touched some of the lenses that came with it).

- on the other hand, I also felt self-conscious, in particular, because I know very little about the cameras there. I had no idea how to use a Rolleiflex, when I held it in my hands, and even worse, I had no idea about whether it was worth what it was priced at. So I ended up not buying it. Generally, I felt like a beginner there, because I didn't know many cameras and I didn't feel confident in touching them or playing with them.

Location

Box Hill Town Hall, in a Melbourne suburb, wonderful town hall, about 30 minutes by car from Melbourne University.

Inside the market

The market started at 9, and from the online information I knew that people would be there early to get good offers.

I arrived at 9.30 and it was fairly crowded.

The town hall had 4 rows of stalls, selling:

- old cameras, almost all analogue (only very few digital cameras), ranging from 'ancient' large format cameras to SLRs, including medium format cameras like Hasselblad, Mamya or Rollei's, and also rangefinders from all brands including a view Leica's

- accessories: everything from lens caps to tripods

- development and print equipment: canisters, enlargers, film, probably also chemicals

- old photos and daguerrotypes

- photo books

The people selling stuff were mostly older men, probably many society members.

The **audience** was probably more men than women—probably more older people, but also some young people (photography students, from what I could hear from the conversations they had).

I was looking for a TLR (Twin Lens Reflex camera)—a **Rolleiflex**, or something cheaper like a Yashica or Ricoh. I found a stall that had two Rolleiflex —both beautiful and maybe reasonably priced (650 and 350). The problem is that I first don't know how to use them, second I don't know how to check their quality, and finally, I have no idea what they are worth, because there are so many different models ranging from a few hundred to far more than 1000 dollars. -> I need to do more research before I get one. Furthermore, I also don't want to buy stuff that I don't really need or when I don't have the time to use it appropriately and when I don't know when I move again. (I looked up more information in the mean time and found a rough price list for the different models, which would have been handy to have at the market. http://www.antiquecameras.net/rolleicords.html)

I saw a few study participants at the **APC Stall**:

- **Gary** was shopping, maybe spending more of his parent's money ;)

- **Diane** was sitting behind the stall, selling cameras—she was the one who organised it for the APC (see Flickr discussion further below)

- and **Ken** was sitting behind the stall, but I also met him later at a stall and had a chat with him:

  o he wants to sell his Mamiya RZ67 Pro—a medium format single-lens reflex camera; a quite proficient camera, because he also has a Rolleicord and he needs money

  o I had a chat with him about his Rollei and he inspected the Rollei that I was looking at, because I had no idea what to look for, or even how to use it. He knew how to use it, but he also didn't know the differences between the generations and with the different lenses.

[…]

Flickr discussion in APC

A says:

Hi all,

we are planning to have a table at this year's APCS (Australian Photographic Collectors Society) market!

The market will be at Box Hill Town Hall on March 21st, it has previously been held in Camberwell.

We're still waiting for the final go ahead, in the meantime people are invited think about gear they might like to sell on the day.

Once we get the confirmation, I'll be putting together a list containing items, prices and any other relevant info. Items are to be dropped off and collected on the day, or hopefully you'll be picking up cash instead.

www.apcsociety.com.au/market.html

B says:

Looks cool :)

Hopefully I'll make it!

Posted 2 months ago.

C says:

I'm.in. Happy to help man/sit stall too. Have a heap of stuff to sell. Let me know.

Cheers

Posted 2 months ago.

A says:

We got confirmation for our table!

If you would like to sell photographic gear send me details via flickr mail. Include the item name/description, condition, prize and anything else you might think is relevant. I'll put together a list and use that as a reference during the day.

The sooner you are able to drop stuff off, the better. The doors open for the public at 9am. The plan is for people to come back later during the day and collect cash or unsold gear.

You will have to come back later in order to pick up, unfortunately I don't drive so I can't do any safekeeping of uncollected items.

Of course, If you'd like to do some table minding or just hang out during the day you're more than welcome to!

Posted 4 weeks ago.

D says:

woohoo!

Posted 4 weeks ago.

[…]

Appendix C.7   Excerpts from Study 3 Interview Transcripts to Illustrate Photo Elicitation and Coding

The following two excerpts from interview transcripts illustrate two things: First, they show how I integrated photos into the interviews to discuss what passion means. Both excerpts contain the discussion of a photo that the participants brought to the interview to represent 'passion' (the photos are displayed below). Second, these excerpts contain transcripts as well as codes and comments to illustrate how I combined the process of transcribing with open coding. This was referred to in this thesis on page 183 and 185.

Excerpt from Interview 2 with Robert

The discussion in the excerpt is based on the photo displayed below. Robert chose this photo from his Flickr favourites to represent the term 'passion'.

Transcript	Comment
[…] ***Could you tell me more about the photos you selected?***	photo task
Yeah	
This one was passion.	passion photo
To me this image expresses like an internal, like an internalised passion. If you take that away it's just a guy reading a book. This [the tennis player jumping above him on a billboard photo] kind of adds some narrative to his thoughts.	
What do you mean by that?	

You can almost imagine that like—you've got that extreme action, it's the complete opposite juxtaposition. It made me think of this comic I read on a webpage, actually I tried to find it, I don't know where I read it any more. It was like, people were sitting on a train, all this people, it's just a long train in a cartoon. And there is a thought bubble, it's like thinking 'all these people are just sheep, mindless sheep'; but the thought bubble went to everybody. It was like everybody is thinking the same thing. And I like that. It's just that people interpret like, people who sit down and read a book as having not any sort of thoughts or anything, that made me think about it. Probably this guy is thinking about many things.	
I'm not sure whether I see how that refers to passion.	
Is passion an outburst, or is it also something inside?	passion: can be quiet
Maybe is passion about reading? I thought that kind of emphasised that he is potentially doing something that he really loves.	passion: do something you love
Regardless of what is happening in the background.	
It does not have to. I looked through lots of photos and 'ah, this person is looking passionate', but passion is not necessarily defined by outward expressions on the face.	
How would you define passion?	
Passion is just about doing something that you love, perhaps even to the point that you consider it worth dying for—that's an extreme case of passion. People can be passionate about the written word, or writing, things like that.	passion: do something you love, would even die for it (duality)
What are the things that you consider yourself passionate about?	his passions
I find myself quite passionate about photography, like— I don't know if I can explain it properly, I don't know, people tend to think of passion as achieving some sort of goal, like saving African villages, or doing some community service, like people who are passionate about creating something that someone else might enjoy. Because I find that when I look at other people's things.	photography is passion: though no higher aim like in a voluntary service, e.g. red cross, etc
So is it a service for other people?	
No, it's not a service. I'm not passionate because of achieving that goal necessarily, but I might enjoy it and feel it's somehow meaningful.	passion is meaningful
Passion can mean so many different things	
Not everyone thinks that art is meaningful. Some people might just totally think, such an explanation might be silly, or something like that. Why do writers write, or painters paint? ?? no money	Passion: not for money

I wonder if your passion relies on other people, who look at your photos?	
No, I think with all art it's about expression. Expression does involve an audience, it could be—not necessarily, maybe it's just satisfying enough to get something from within you outside, like why people might draw, they might want to express a theme. Whether or not someone else reads it or not might be incidental. It might be just them wanting to get some words on paper, to help them figure something out on their own. I think art is a way of understanding yourself. […]	art: expressing something

Excerpt from Interview 2 with Ken

The discussion in the excerpt is based on the photo displayed below. Ken chose this photo from his Flickr favourites to represent the term 'passion'.

Transcript	Comment
[…] We haven't talked about the passion photo. Why have you picked this particular photo?	Passion—photo task
Yeah	
I chose this photo basically because of how it looks, but the passion I think comes out, actually comes from me. When I read, there is a lot of religious little phrases on this thing. I'm an atheist and the way I see religion is, I guess it as I see it as bringing out a lot of passion in people. And the way that I—I'm quite passionate about my atheism. I guess that's just - I guess that's one less about the photo than about me. Looking at the photo brings out the thoughts of passion in me.	Passion as religion

What do you mean by passion? Because it can mean a number of different things.	
Yeah	
Obviously not sexual passion.	passion in sexual sense
But more just I guess strong opinions, passion as in a strong inclination, and in that inclination I mean my opinion on atheism and religion. I'm passionate about it in that I think strongly about it.	passion as in a strong inclination,
Is it something that is important to you or something that you feel strongly about?	
Neither	
Sort of that important, but I wouldn't really say it's important to me. But I feel strongly about, I'm very adamite about my thoughts, yeah. It is important to me, but I don't think that's the passion of it. I think the passion is that I feel very strongly about it, that's all.	
Are there other things you are passionate about?	
Yeah	
probably not in that way. I'm passionate about photography. That's probably when ??	
I'm passionate about photography but in a different way.	
Not in a way that you have a strong opinion about it?	
Yeah	
no	
I can't think of anything else that I have as strong an opinion about.	
What's then the passion in photography?	
the passion about photography is that it is something that is very important to me.	passion photography something important, meaningful
That would fit with my passion for photography.	
And like with photography, I spend a lot of time doing it, but that's not what makes me passionate about it, it's that it's very important to me.	sacrifice time
I think for me photography is a creative outlet, and I only discovered that I needed a creative outlet, maybe first year uni or so, not at uni, but about that time. Because I realized that I didn't have any creative outlets.	passion as creative activity

And I remember I took, I did a lot of mountain biking and all my friends did a lot of mountain biking, so we went out and we got videos of each other, doing tricks and going downhill. And then I got all the footage and I created a little movie from it. And I spent ages; I spent like days making it. And I had that as a creative outlet that I hadn't had before, and I realized that that was something that I really enjoyed. And I just had a feeling that it was something that I was missing out. Something that I didn't have in my life.	beginning of passion for creative work
It's not enough to do something like mountain biking; it's really about creating something?	
Exactly, yeah	
and I'm not sure why, but I think, I'm sure I need that as a part of my happiness or something. But I'm sure most people need something as a creative outlet. So, photography fulfills that for me.	
do you see that passion in other people in photography?	
Yeah	
Definitely, the APC and the Melbourne Flickr group and the Strobist group and people like that. Most people who are involved in that are really passionate about photography. And they spend a lot of time on it and you sort of get the feeling that if photography was taken away from them, then they would feel a little bit empty, you know? They'd really miss it if it went away. […]	sharing passion with others via Flickr and offline attachment to passion

Appendix C.8   Descriptions of All Participants in Study 3

I wrote short descriptions of all participants after each interview to summarise key issues discussed during the interview and to capture observations I made beyond what was said during the interview. These observations contain notes on their personality, appearance or the environment in which we met. I used these descriptions together with their Flickr profiles and mind maps that summarise their activities and motivations to keep an image of the participant in mind during my analysis of the data. These descriptions complement the demographic information provided in table 6-1 on page 182 with textual descriptions of all participants. This was being referred to on page 183.

Diane

Diane was a highly respected member of the *Analogue Photography Club*. She was an active committee member, an admin of the Melbourne Flickr group, and a popular Flickr user. I found her profile, because she was featured on the official Flickr blog, which may have further contributed to her popularity on Flickr. Her photos of suburban life were inspired by William Eggleston and made it regularly into Explore, even though most of them looked very reduced and in her own words 'boring' to many people.

Diane used a digital SLR when she got seriously into photography, but she now has strong views against the aesthetics of digital photos. She used the word 'hate' to describe her attitude towards digital cameras, because she found the photos too clean, too sharp and too sterile, whereas analogue photos had a more natural and pleasing look to her. She was also strongly opposed to over-processed photos, fake vignettes, fake lomos or cropped images, stating that the photo should be produced inside the camera and remain true to the qualities of the camera.

Unlike many other *Analogue Photography Club* members, Diane was not interested in the camera as an object or technicalities of lenses and films. She used an Olympus XA viewfinder camera for most of her photos, because it was cheap, unobtrusive and fitted easily into her handbag. Although Getty Images acquired some of her photos for their stock photo collection, she said that she was not interested commercial photography because it would kill her passion for photography.

Gary

Gary was the only person replying to a post by Ken on the *Analogue Photography Club* Flickr group discussion forum, in which Ken had advertised my study. Meeting Gary I was surprised by his young age. At only 18 years he is possibly the youngest *Analogue Photography Club* member, but he had an immense knowledge about equipment, processing film, and the history of photography.

Gary acquired his knowledge through photography classes at school and his own work. He spent his spare money on cameras and film, and he owed his parents money for his investments. He was the only participant in my study who not only developed film but even produced his own optical prints in the dark room in his school.

Making all these sacrifices to produce photos, I was not surprised that Gary was one of the fiercest opponents of digital photography. He said that digital photography has no soul and that he preferred the grain and the more natural colours of analogue photos. He scanned most of his photos for archival and for sharing on Flickr, but his Flickr updates were rather rare due to the long time required to develop, scan and edit photos.

I was surprised to see on the website Scout that 5 of his photos made it into top 500 of Explore, and another 16 were in the top 500 but dropped out again, which demonstrated his skills and his connectedness on Flickr. He said that he spent 'too much time' on Flickr, and he knew all the myths about the secret Explore algorithm. He loved technical discussions on Flickr and he also participated in groups that gossip about Flickr users.

He recently exhibited his photos in an exhibition organised by his school and was clearly excited about this. He would like to continue exhibiting, and he dreamt of selling his prints, but he chose cinematography rather than photography as his course for university, which he planned to commence in the year following this study.

Henry

Henry was a university student in engineering. He initially got into photography through a group of friends during high school, and he still met and shot with them. Until recently he shot only with his digital SLR, but at our first interview he showed me his newly acquired film camera, a Nikon SLR. After learning the basics digitally, he wanted to explore analogue photography. He enjoyed film-based photography because of its aesthetics, which reminded him of the works of classic photojournalists like Henri Cartier-Bresson.

After our last interview I also saw self-developed photos on his Flickr stream, showing that he pursued the analogue angle further, even though it takes up more time and costs more than digital photography. Despite his passion for analogue photography, he still used digital photography for his travels and for Strobist (off-the-camera flash) photography.

He used Flickr to post his photos, but he rarely posted them to group pools. Accordingly he had only few comments or favourites. He used Flickr to learn more about photography and to gain inspiration for Strobist photography and for his analogue work. He was a Flickr group member of the *Analogue Photography Club,* but he did not actively contribute to it. Nevertheless, he received information and inspiration from the group.

Ken

Ken was a professional photographer who ran his own business. He got into photography during a photography course at university and now shoots commercially for fashion catalogues. More recently he produced photos for a Koala heritage centre, which matches his interests in Strobist (off-camera flash) photography and landscape photography. He spoke passionately about commercial and personal photography, though he kept them separate.

He used Flickr only for personal photography—initially landscape photography, but increasingly also Strobist photography, and due to the influence of the *Analogue Photography Club,* also more street photography. The Strobists and *Analogue Photography Club* members were also his main contacts on Flickr. He had some strangers in his contact list whose photos he admired, but he was hesitant to add strangers who contacted him, because he viewed them as Flickr users who only added contacts in order to get more views. Ken did not want to engage in the temptation to use Flickr only to get into Explore. On the other hand, he was very observant about his own photos that made it into Explore as well as 'Flickr rock stars', whose photos made it regularly into Explore.

One of the most notable aspects in both interviews was his passion for the entire process of analogue photography, in particular for old cameras and for the development of film. He

excited me about these things so that after our conversation I was ready to get into developing film and I am still keeping an eye open for a particular vintage camera—a Rolleiflex.

Ken also got excited about my research project and got me in contact with 2 further members of the *Analogue Photography Club* (Gary, Martin). He was generally very easy to talk to, and it was rather difficult for me to keep the interviews short.

Martin

Martin was one of the founders of *Analogue Photography Club* and its president at the time of the fieldwork. (He stepped back from this role a few months after the interview but still remained an active member). He provided me with insights into the quick development of the club since 2006 and its activities, like the *Analogue Photography Exhibition*, photo competitions, meet-ups, bulk orders from the USA, the club website and the Flickr activities. He was very supportive and spared time for me, even though he was less active in the *Analogue Photography Club* because of his newborn baby.

Martin liked the idea of exhibiting his photos, but unlike Diane, Sebastian and Robert, he did not call himself an artist. Martin was still looking for a style or a message that connects his photos, which he mostly took when opportunities for photos arise on the way. He was also trying to understand how popularity and i.e., Explore on Flickr work. Like most *Analogue Photography Club* members he was well connected on Flickr, but he got far less comments and views than Diane or Robert, though he did not want to overemphasize the importance of the Flickr popularity and Explore. He used Flickr also for discussions about cameras and films as well as for discussions about non-photography related topics like religion.

The technical processes ('photowork') were a source of enjoyment for Martin: He developed black-and-white film at home (like Henry, Ken, Robert, and Gary) and experimented with pinhole cameras, like shooting with a film frozen in an iceblock inside the pinhole camera. He also enjoyed the technicalities of cameras, and owned several old cameras, including some that did not even work any more. Although he derived pleasure from old cameras and photowork, he acknowledged that the photowork takes considerably longer and that he was permanently looking for ways to speed up and improve the quality of the processes.

Martin worked for Canon in a non-photography related area, but he also ran a photography business with a friend as a side activity to shoot weddings and other events. One of his Flickr photos was also chosen for a book cover. He acknowledged that it is nice to make money with photos, but he also thought it would spoil his passion if he would do photography as a main occupation.

Robert

Robert was probably the most popular photographer on Flickr of all *Analogue Photography Club* members. According to the website Flickriver, 4 of the 10 most interesting of the *Analogue Photography Club* group pool were his shots. Robert's photos got large numbers of views, comments and favourites, and made it regularly into Explore. He tried to downplay the importance of popularity, but he was very well aware of his statistics on Flickr and of the factors that influence the algorithm behind Explore.

He was also well known in the *Analogue Photography Club*. Three other participants in this study mentioned his photos, or the story around his camera: He generally used a large and bulky Pentacon 6 medium format camera with a Carl Zeiss lens, which had a stuck aperture. Thus the aperture was always wide open, which required him to shoot at night and gave his photos a very shallow depth of field and bokeh.

Robert was very reflective about his work, though he acknowledged that he thought the interview led him to think about many things for the first time. He saw himself as an artist and characterized his style or the overarching theme of his photos with solitude, but with a sense of hope. His goal was to exhibit his photos in galleries and to establish a reputation beyond Flickr. He participated in several group exhibitions and had his first solo exhibition in between the interviews, where he sold numerous photos.

Robert worked for a movie distribution company, which nourished his other passion—movies. At the same time, he also did some commissioned photography—he shot one wedding and did stills for a few short films in his spare time. He used digital cameras for his commissioned work, but otherwise preferred the aesthetics of film-based photos.

Sebastian

Sebastian ran several restaurants together with his family. This business allowed him to spend probably the most money of all on photography: In both interviews he was telling me about the next camera he wanted to buy, the new Leica M9, a digital rangefinder camera that retains the classic qualities of a Leica—precise, compact, unobtrusive and incomparable photo quality—priced at AUD 10.000 for the body of the camera.

Sebastian loved cameras, digital and analogue ones. Unlike most other participants, he was not so obsessed with the different aesthetics of the photos but rather with the handling of cameras and their beauty as objects. One of his other favourite cameras is his Rolleiflex, a Twin-Reflex camera from the 1950's, which challenged him to shoot and think differently. He said that he had probably owned every camera he wanted to have, and he sold most of them to finance his new Leica. Similar to a person with an addiction, he kept the true value of his cameras as a secret from his wife.

Sebastian got into photography during travels to the USA when he saw Ansel Adams photos in an exhibition. A friend helped him to buy a camera and taught him more about photography. While he occasionally attended the events of the *Analogue Photography Club* (and also exhibited in the group exhibition), he primarily shared his passion for photography with a circle of friends outside the club. He met them regularly to talk about cameras and to take photos, and got me in touch with one of them for this study (Steve).

For 2 years he also worked as a professional photographer shooting stills for movie productions. He quit professional photography because he could not shoot the types of photographs that he liked; he felt merely as a person who pushes the button to take photos that others could take as well.

Since then, he had pursued photography as a passion, mostly during his extensive travels that provided him with inspiration. He said that his wife had the problem to decide what clothes should go in the suitcase when she travelled, while he needed to decide how many cameras, lenses and rolls of film he could take with him.

He used Flickr primarily to post photos and he probably published more photos on Flickr than any other participant. From his 4-week trip to France he posted around 250 photos, whereas other Flickr users only select very few to get more views on them. He also used Flickr to look through other people's photos, but he said he also has hundreds of photo books, and he even bought newspapers only because of the quality of the photos in them.

Sebastian came across as a very supportive and energetic person, who could get very excited about photography and cameras. He gave up his professional career, but he pursued photography now more in an artistic way. He recently hired a gallery space to run his first solo exhibition, and he was planning another exhibition with 2 other photographers for next year in Melbourne and Paris.

Steve

I established contact to Steve through his friend Sebastian. Sebastian said that Steve had the bigger problem with collecting cameras, but that he would deny it. While Sebastian was very excited and emotional in talking about cameras and photography, Steve was rather calm and considerate. Steve also owned some rather expensive cameras and lenses (Leica M series, Rolleiflex, Voigtlander), but he argued convincingly that he needed them to take the kind of photos he was interested in. He shot mostly while travelling and on the street, which requires a quiet and unobtrusive camera that fits into the pockets of his jacket and which works quickly and quietly. Therefore he also preferred analogue cameras, because they were more intuitive to him and quicker to set up and in shooting.

Steve demonstrated to me how he sets up his camera in his pocket (pull film lever, focus, shutter speed) and then pulls it out and shoots in a quick arm movement, without looking at the camera. He also taught me how to set up the camera in advance for the lighting conditions and how to focus without looking through the camera, so that the camera is immediately ready for shots.

Steve's photostream on Flickr was very impressive: His shots stemmed mostly from travels to India, Vietnam and Cuba, and all photos were technically perfect and often very formally and elegantly composed. His photos reminded me of Steve McCurry's photos for National Geographic—wide-angle shots to show people from different cultures close up but also together with their environment.

Steve used Flickr to show his photos and to get a feeling for what shots people like, but also to have a backup of his photos. He got his films developed, but he scanned them with high resolution to have a high quality archival for large prints. Scanning one photo and removing the dust in Photoshop took him between 30 and 45 minutes and resulted in a 100 megabyte RAW file. Due to the time demand of scanning, he had a long backlog of photos to scan on his desk. He also lost a hard disc with 300 GB of his photos recently, because the hard disc crashed. He described this event as 'very painful', because he needed to do all the work again, and now he had two hard discs in two different places to be safe.

Steve enjoyed taking photos, but he was not interested in doing it for a living, because he felt it would constrain his artistic freedom. Unlike all other participants, he also did not pursue photography to get his photos exhibited in a gallery. Sebastian asked him several times to exhibit together with him, but according to Sebastian, Steve said his photos were not ready for exhibitions.

Appendix C.9 Excerpt from a Study 3 Memo on Passion in Photography

The following excerpt illustrates how I captured my ideas about passion in photography during interviews and participant observation, and how I developed them into themes for the coding process. This was being referred to on page 184.

Memo: Passion in photography

Aim of this document: Capture what photographers are passionate about

Divergence in passion

It seems that within that larger passion of photography, people have their own niches of what they are passionate about.

There was a nice quote in the first part of the BBC documentary "The genius of photography": An artist said something along the lines:

"Photography is of all art forms the easiest one to achieve competency, but the hardest one to create a unique style by which someone is recognised"

Shooting analogue is being special

All APC people argue that analogue film has a special quality, the colours are nicer, the contrasts are not as harsh and the images usually have a more natural feeling.

Embracing idiosyncrasies of old cameras

Robert loves his camera that is rugged, breaks down a lot, and requires careful loading of the film. He even uses a lens where the focus is broken (and thus fixed to a particular position) to his advantage and loves it, because it challenges him when he needs to wait until the subject is in the right spot, and he is all the happier if a photo turns out.

The same goes for pinhole cameras and exposable cameras: the weaknesses get embraced, because if a photo turns out reasonably well, it's worth much more than the same photo taken with a DSLR. You have to do something special to create a photo, otherwise it would be too easy.

The same goes for expired film: It produces grain and other distortions, which can destroy most shots, but sometimes they turn out beautifully.

-> maybe there is value in viewing those practices as acts of defamiliarisation or even as enjoying the incidental or maybe even serendipitous results at a time when taking photos has become so easy and ubiquitous.

Gearheads, collectors and camera fetishism—romanticising the old & chasing the latest / newest

Maybe there are 2 categories in here: cutting edge technology vs romanticism for the old and valuable

Sebastian likes collecting & shooting with all kinds of film cameras. Needs to have first Leica M9 in Australia

Diane likes the variety in old film cameras.

Getting lost in processing

Ken told me all about the struggles and excitement in processing the films. There are many things that can go wrong, but eventually it's worth the struggle, because it's cheaper and more rewarding, and probably he would argue also higher quality.

The discussion thread on the APC Flickr group about scanning [URL]

Indicates that processing gets more emphasis than the subject or the result, which is what Shawn criticism of APC: technique more important than subject?

Preserving the image

Steve spends most of his energy with preserving the image. He is great at taking photos, but his struggle is to preserve the images properly: He scans almost all of his slides. Each scan takes 30-45 minutes in order to get the colours right. Each photo is around 100MB large to get a high resolution. He needs to do it himself, because the quality of the scans in the lab is not sharp enough. Thus he has a back log of hundreds of slides to scan.

He is so 'obsessed' with it, because one of his hard discs crashed and he lost 300GB of photos, which means a lot of work lost. I think he said something like "this was very painful". Thus he backs up all his photos on several hard discs in different places.

Photographers need a challenge

can be either processing film, where things can go wrong (Ken, Robert)

lack of instant feedback and reducing the number of shots as compared to DSLR (Henry)

taking photos at night (Robert)

producing the right result in the camera (or during processing in darkroom) rather than in Photoshop (Diane, Ken)

or a camera that is slow and breaks a lot and does not give you freedom to focus (Robert)

-> analogue photography helps to keep up that challenge in a world where DSLRs allow anyone to take nice photos without effort and without skills and knowledge,

amateurs need the challenge to keep going—like discussed in Grinter 2005—where amateur photographers renegotiate the rules for photos in competitions; or in Bogdan paper, where he mentions that programming gives them a challenge to engage or the same with the radio enthusiasts - > maybe I find something about challenge in Stebbins's work on amateurs

Process over Subject / Romanticising the obsolete / Recreating the mystic of the photo to combat the point & shoot (or even DSLR) mass culture on Flickr and elsewhere

That could describe all the aspects under the heading Divergence in passion

Many of the themes within the APC seem to take the focus away from the subject to the process of creating an image. At a time when virtually anybody can pick up a DSLR, take a high quality photo (with automatic settings) and upload them on Flickr and get popular, traditional photographers may fear that their skills have become obsolete.

[…]

Appendix C.10   Mind Map of Participation in Flickr

During the analysis of study 3 I created several mind maps to capture preliminary observations and to sketch relationships between observations and ideas that I developed through the memos. The mind maps summarised the key ideas of the following topics:

- Online and offline connections with other Flickr users and club members

- Career stages in photography, based on the stages developed in study 2

- Participation in Flickr, based on the tool, community, and theatre themes from study 1 and study 2

- APC activities that integrate Flickr and offline activities

- Passion, extending the literature review and the findings from study 1

- Photography practices, extending the 'photowork' processes described by Kirk and colleagues (2006)

- Values attached to analogue photography

These mind maps helped me to keep an overview of the key ideas during the conduct of the fieldwork and the coding of the study data. The mind map below gives an overview of the different kinds of participation in Flickr and how they relate to the tool, community, and theatre themes developed in study 1. This document was referred to in this thesis on page 184.

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Appendix D

Publications During Candidature

This appendix contains all peer-reviewed publications arising from the time of my candidature. These publications were referred to in this thesis on page ii.

Appendix D.1   Conference on Persuasive Technology (PERSUASIVE 2008)

Ploderer, B., Howard, S., Thomas, P., & Reitberger, W. (2008). "Hey world, take a look at me!": Appreciating the human body on social network sites. In *Proceedings of the Conference on Persuasive Technology (PERSUASIVE 2008)* (Vol. 5033, pp. 245-248). Berlin: Springer.

"Hey World, Take a Look at Me!": Appreciating the Human Body on Social Network Sites

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Abstract. Social network sites (SNSs) such as Facebook have the potential to persuade people to adopt a lifestyle based on exercise and healthy nutrition. We report the findings of a qualitative study of an SNS for bodybuilders, looking at how bodybuilders present themselves online and how they orchestrate the SNS with their offline activities. Discussing the persuasive element of appreciation, we aim to extend previous work on persuasion in web 2.0 technologies.

Keywords: Persuasive technology, social network sites, web 2.0, persuasion, appreciation, recognition, fitness, bodybuilding.

1 Introduction and Background

Social network sites (SNSs) like MySpace, Facebook or Cyworld have attracted millions of users. These sites allow users to present themselves on a profile page, to establish visible friendships with other users and to exchange messages. Compared to other web 2.0 technologies, SNSs also tend to be better integrated in offline activities [1], which makes them a useful tool to help people change their lifestyles. Fogg [2] even states that in 2007, Facebook has been the most effective persuasive technology.

This paper investigates how SNSs persuade people to adhere to a lifestyle based on fitness training and healthy nutrition. The persuasive element we are looking at is *appreciation*, the recognition users get online [3] and the feeling of empathy people experience in their interactions with others who have had similar experiences.

Bodybuilding is an example of an individual-oriented sport that provides a contrast to the interconnectedness of SNSs. Bodybuilders use SNSs (in this case an SNS called BodySpace) as a support tool to adhere to their lifestyles based on training, diet and recuperation. On the SNS they present their physiques and exchange appreciation for their achievements in preparing and competing in bodybuilding competitions.

Our aim in this study is to start to extend previous work on persuasion in web 2.0 technologies [4, 5, 6] and help to inform the design of persuasive technology promoting sustainable healthy lifestyles.

2   BodySpace: A Social Network Site for Bodybuilders

BodySpace (www.bodyspace.com) is an SNS with a current base of more than 125,000 gym users and bodybuilders. Similar to other SNSs, people can create a profile page to present themselves and establish publicly articulated friendships with other users. They can also leave comments on other people's profile pages or exchange private messages. The site has additional features that allow people to describe their goals and to monitor their progress using body and training statistics. For example, the progress pictures feature allows users to upload photos with a timestamp to create a visual history of their transformation as in figure 1a. Beyond that, BodySpace is integrated with a photo gallery, individual blogs, a discussion forum and an online shop for fitness equipment and food supplements.

Fig. 1. a) The progress pictures illustrate the participant's transformation from an obese to a muscular physique. **b)** The profile picture shows the participant posing after a victory.

3   Field Study

We used a qualitative approach to explore, how bodybuilders orchestrate the use of BodySpace with their offline activities. Our approach used semi-structured interviews and participant observation – both online on BodySpace and offline in bodybuilding gyms and bodybuilding competitions. We conducted 10 interviews with BodySpace users (3 female, 7 male; aged between 20 and 56 years). The interviews were conducted face-to-face, on the telephone and via email. We also collected data from the participants' BodySpace profiles, which included their personal descriptions, photos and a total of 1968 posted comments. The participants were recruited through a private message on BodySpace. Using a purposive sampling strategy allowed us to recruit bodybuilders at different stages of their careers, ranging from bodybuilders preparing for their first competition to bodybuilders who competed on a professional level. Two further face-to-face interviews were conducted with experienced bodybuilders who are not on BodySpace, as a way to verify our findings. We analyzed the rich set of data using a 3-step coding process [7] leading to various themes. In this paper we focus on the theme of appreciation and discuss, how appreciation offline in the gym and online on BodySpace relate.

3.1 Seeking Appreciation

The absence of appreciation offline was a common theme in the interviews: The group of competitive bodybuilders reported that only people who also went through the *"hell of preparation" (Bill[1], 27)* could relate to what they had achieved. Body-building competitions are the most important place for appreciation where people present their bodies on stage in front of a knowledgeable audience. Despite the competitiveness in these places, most participants reported a sense of mutual awareness among bodybuilders for their hard work; but elsewhere they felt a lack of understanding by their friends, families, and often even by their gym peers. For example, two people reported negative remarks in the gym: a woman was criticized in her gym for not looking lady-like and a man was accused of taking steroids.

Similar to presenting oneself on stage in a bodybuilding competition, BodySpace allows bodybuilders to present themselves online - presentation being a prerequisite for receiving appreciation. One participant said: *"It gives us a place to post our picture for the whole world to see... Bodybuilders need to be noticed... It feeds our muscle ego, it motivates us" (Dave, 28).* The participants used profile pictures to highlight their favorite body parts, show themselves on stage (see fig. 1a), or to attract the attention of magazines to work as a photo model. Competitive bodybuilders used the progress pictures to document their progress in the preparation for competitions. One participant used the progress pictures to present her transformation from an obese body to a lean body, and then to a muscular bodybuilding physique (see fig. 1b). Before sharing the photos on BodySpace, she used them at home to remind herself of the progress she had made.

Self-presentation does not only take place on one's own profile page. Recent updates of pictures, goals and statistics are automatically featured on the BodySpace homepage. Some participants looked proactively for appreciation. They left comments on their online friends' profile pages, to let them know about profile updates, or how they performed in competitions.

3.2 Exchanging Appreciation

All participants had established connections with friends on BodySpace, ranging from 8 to 147 mutual friends. They reported a feeling of empathy through the connections with people who went through similar experiences, although only two participants had a friend on BodySpace, who they also met in real life.

The non-competitive bodybuilders in this study used the network as a resource to seek advice from experienced bodybuilders. The profile description allowed them to approach people for specific advice according to their achievements, which was seen as an advantage to more anonymous discussion forums. The appreciation they received, was either some form of advice or the offer to help based on more detailed information, together with a compliment on the progress they had already made, for example: *"Your transformation kicks ass! … Great Job!" (Catherine, 24).*

All participants on BodySpace used comments to leave compliments on other people's profile pages. Most comments were related to the body parts featured on photos

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[1] The names of all participants have been changed.

or to the goals expressed on the profile page. Usually they contained a statement of positive reinforcement, e.g., *"Keep it up man! You'll look huge with an extra 8kgs of muscle on you" (Jarvis, 23).* Appreciating other people's achievements was typically reciprocal and led to the reception of a similar comment.

The highest form of appreciation was receiving a message that one's work is an inspiration or a role model for the other person. One participant stated *"Other female competitors telling me they want to look like me when they next compete - this blows me away!" (Monica, 35).*

The feedback of other BodySpace users sometimes even went beyond the mere appreciation of the bodybuilding achievements. Several participants reported that they received propositions online by other people of the opposite sex and the same sex.

4   Conclusions and Future Work

In this paper we have started to explore various forms of appreciation that bodybuilders exchange in a social network site and related offline environments. The BodySpace site is a tool to provide a permanent form of self-presentation and to connect individual athletes. Compared to offline environments, BodySpace provides an environment of enhanced mutual appreciation based on recognition and empathy.

This study highlights how an SNS like BodySpace allows experienced bodybuilders to exchange appreciation with peers, and in future studies we will look at how this works more generally – for example for new gym users or athletes in other sports. We have also started to explore the way in which sites like BodySpace work as persuasive environments that promote activities such as comparison and social learning. In future studies we will use existing theory on persuasion as a lens to further examine these themes.

References

1. Boyd, D., Ellison, N.: Social Network Sites: Definition, History, and Scholarship. Journal of Computer Mediated Communication 13, 210–230 (2007)
2. Fogg, B.: http://captology.stanford.edu/facebook.html
3. Fogg, B.: Persuasive Technology: Using Computers to Change What We Think and Do. Morgan Kaufmann, San Francisco (2002)
4. Fogg, B., Eckles, D.: The Behavior Chain for Online Participation: How Successful Web Services Structure Persuasion. In: de Kort, Y., IJsselsteijn, W., Midden, C., Eggen, B., Fogg, B.J. (eds.) PERSUASIVE 2007. LNCS, vol. 4744, pp. 199–209. Springer, Heidelberg (2007)
5. Kapoor, N., Konstan, J., Terveen, L.: How peer photos influence member participation in online communities. In: CHI 2005 Ext. Abstracts, pp. 1525–1528. ACM, New York (2005)
6. Khaled, R., Barr, P., Noble, J., Biddle, R.: Investigating Social Software as Persuasive Technology. In: IJsselsteijn, W., de Kort, Y., Midden, C., Eggen, B., van den Hoven, E. (eds.) PERSUASIVE 2006. LNCS, vol. 3962, pp. 104–107. Springer, Heidelberg (2006)
7. Strauss, A.L., Corbin, J.M.: Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory. Sage Publications, Thousand Oaks (1998)

Appendix D.2   Conference on Computer Supported Cooperative Work (CSCW 2008)

Ploderer, B., Howard, S., & Thomas, P. (2008). Being online, living offline: The influence of social ties over the appropriation of social network sites. In *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2008)* (pp. 333-342). New York: ACM.

Being Online, Living Offline: The Influence of Social Ties over the Appropriation of Social Network Sites

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ABSTRACT
Research on social network sites has examined how people integrate offline and online life, but with a particular emphasis on their use by friendship groups. We extend earlier work by examining a case in which offline ties are non-existent, but online ties strong. Our case is a study of bodybuilders, who explore their passion with like-minded offline 'strangers' in tightly integrated online communities. We show that the integration of offline and online life supports passion-centric activities, such as bodybuilding.

ACM Classification Keywords
H.5.3 Group and Organization Interfaces.

General Terms
Theory, Verification.

Author Keywords
Online communities, social network sites, appropriation, bodybuilding.

INTRODUCTION
Social network sites like Facebook, MySpace or Cyworld have attracted millions of users worldwide. On these sites people present themselves on profile pages, they establish ties with other users and exchange messages with them. These interactions on social network sites are often deeply entwined with people's offline experiences [1, 5].

Many social network sites are used to keep in contact with people with whom someone already shares some form of offline connection [5]. Therefore people orchestrate interactions offline and online in order to maintain these friendships. Previous research has looked at these interactions with offline ties on socially-organized social network sites like Facebook [11, 16, 19], MySpace [4], Friendster [2] or CyWorld [18].

Other social network sites connect people because of a shared passion [5], such as religion (e.g., MyChurch), pets (e.g., Catster, Dogster) or specific hobbies (e.g., Ravelry). Such passion-centric social network sites connect mostly people with no previous offline connection. Therefore, the integration of offline and online is not based on ties but depends on activities related to a shared passion. However, we only have limited knowledge about the integration of offline activities on social network sites, when previously established offline ties do not exist.

This paper addresses this gap by presenting the findings of a qualitative study on a passion-centric social network site for bodybuilders called BodySpace[1]. BodySpace is designed to provide bodybuilders with motivational support for their training regimes, diets, and the preparation for competitions. We present three major themes of current practices of integrating BodySpace with offline activities: Bodybuilders use BodySpace as a tool to enhance their activities, they engage in theatrical performances online or they engage in interactions with the BodySpace community.

This paper extends previous work on social network sites by providing empirical evidence that the absence of offline ties does not hinder the close integration of offline and online worlds. Passion-centric social network sites are deeply entwined with people's everyday lives. This finding has practical implications for the design of future technologies in the context of promoting healthy lifestyles. The close integration of offline and online life makes passion-centric social network sites well suited to influence people's lifestyles in order to promote body conscience, fitness training, and healthy nutrition. We close the paper by discussing design factors for social network sites that support the integration of offline and online activities in the context of healthy lifestyles.

WORK OF OTHERS
In this section, we discuss related work on technologies that support people with their passion to stay fit. We link these findings to online communities such as social network sites, and discuss qualities of social network sites that make them well-suited to influence the behaviors of individuals offline.

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[1] http://www.bodyspace.com

Technologies that Support Healthy Lifestyles

Research on persuasive technology investigates how technologies can be used to motivate people, e.g., to give up smoking or to exercise more. Fogg [13] established a framework of design principles for persuasive technology based on theories from social psychology. For example, the social facilitation theory states that people are influenced by the mere presence of others, which leads to heightened arousal and to increased performance [33]. Thus technology that allows other people to be virtually present can motivate users to perform a target behavior [13]. Based on this principle, Consolvo and colleagues [6, 7] developed several prototypes that encourage physical activity by sharing step counts with friends. Similarly, Mueller and colleagues [24, 25] developed prototypes to create a virtual co-presence of people at different places in order to engage them in activities like soccer, table tennis or jogging.

Further research on technologies that encourage healthy lifestyles includes the use of heart rate monitors for runners [28], virtual agents for gym users [12] and the use of public displays to motivate moderate exercise [21]. All of these technologies are prototypes designed for single users or small groups to provide motivational support. However, these studies provide little insight into how technologies are used in larger social aggregations like social network sites.

Influence through Social Network Sites

Khaled and colleagues [17] discuss potentials for motivation and influence in online communities and thereby extend Fogg's theoretical work [13]. They argue that lurking on online communities (e.g., reading information in a discussion forum) can motivate people to exert a targeted behavior like physical exercise. People compare themselves with others or they adopt behaviors and attitudes from role models. Active participation in online communities fosters the adoption of behaviors in line with the group norms to gain social approval, to uphold group identity and to maintain group harmony [17]. Furthermore, online communities can provide social support and thereby influence people's well-being [31].

Social network sites inherit those characteristics, but they also incorporate additional qualities that set them apart from other community technologies like discussion forums. These qualities make them particularly useful to motivate individuals to maintain a healthy lifestyle. Most online communities are organized around a common interest, e.g., discussion forums provide a hierarchical structure for people to discuss topics. Instead, social network sites are primarily organized around people [3, 5]. When people log on, their view of the social network site is centered on their profile and the interactions with their networks of friends. This is especially relevant for socially-organized social network sites like Facebook where people log on to look up and keep in touch with their friends [16]. However, the organization around people on social network sites applies also for passion-centric social network sites. Although

people log on to these sites to pursue a shared passion, their organizing scheme remains on people.

Furthermore social network sites constitute an environment for people to present themselves to an imagined audience of networked friends [3]. Research in sports psychology has confirmed that self-presentation offline impacts the motivation to exercise. Self-presentational concerns can increase as well as decrease motivation to participate in exercise behavior, usually depending on whether people feel comfortable with their bodies in a certain environment or not [15, 20]. Previous work on online social network sites for gym users investigated the relationship of self-presentation and recognition online [27]. However, it has not discussed the link to the offline world and the influence of online self-presentation on the motivation to exercise.

A third quality of social network sites is their integration with people's everyday lives [1, 5]. Compared to most other online communities, social network sites like Cyworld or Facebook tend to be well integrated with people's offline lives, because they are used to connect with people with whom people already share some form of offline connection [18, 19]. Previous scholarship has applied different theoretical lenses to investigate the maintenance of existing ties on social network sites, such as signaling theory [9], self-presentation [10], social capital theory [11], or the uses and gratifications approach [16]. However, there is a limited understanding of the integration of offline and online resources in the absence of previously existing ties on social network sites.

Gap and Research Question

Previous work states that social network sites inherit qualities like people-centeredness, self-presentation and close online-offline integration based on ties that link offline and online life. These qualities support individuals with passion-centric activities. However, it is unclear how these activities unfold on social network sites in the absence of ties that link offline and online life. This paper addresses this gap by investigating the following research question:

- How do people appropriate online and offline resources to support passion-centric activities where offline ties are absent?

STUDY CONTEXT AND METHODS

Context Bodybuilding

In our study we looked at a group of people who are passionate about bodybuilding. We use the term bodybuilders to refer only to those gym users who actively participate in bodybuilding competitions or who are planning to compete in the near future. Preparing and participating in bodybuilding competitions is extremely demanding, both physically and mentally. Therefore, bodybuilders can get overly passionate about their sport and sometimes develop pathological behaviors, such as overtraining, exercise dependence and the use of illegal

performance-enhancing drugs [23, 30, 32]. However, many bodybuilders are role models for living a healthy lifestyle based on training, healthy nutrition and sufficient sleep.

Many bodybuilders work out alone, because other gym users may not be able to relate to the mental and physical challenges involved in the preparation for competitions. Even when other bodybuilders are present in a gym, work atmosphere and competitiveness prevent conversations. To alleviate this isolation, many bodybuilders use online resources, e.g., to obtain information about training and nutrition or to socialize with other bodybuilders.

Research Site
We focused on BodySpace, which is a passion-centric social network site for bodybuilders. Currently BodySpace has more than 160,000 registered gym users and bodybuilders worldwide. Similar to other social network sites people on BodySpace can create a profile page to present themselves and establish publicly articulated friendships with other users. They can also leave comments on other people's profile pages or exchange private messages.

The BodySpace profile offers various bodybuilding specific features: It contains descriptions about the motivation to start bodybuilding, goals and achievements, workout programs, reviews of food supplements, as well as a history of results in competitions. The profile is integrated with a photo gallery and a progress picture section, which provides a timeline of photos and related comments. Users can integrate their own videos from YouTube in their profile or link to other people's bodybuilding videos. Furthermore, BodySpace provides users with the opportunity to keep statistics about the weights they lift in their training as well as measures of their body, e.g., the size of their arms. Finally, BodySpace is integrated with a so-called BodyBlog, on which people report on their experiences in trainings, competitions and other aspects of their lives. All this information is freely accessible and searchable.

BodySpace is part of the larger bodybuilding website Bodybuilding.com, which provides comprehensive information on all aspects of bodybuilding from training methods to competition results. BodySpace and Bodybuilding.com are free to use because they are integrated with an online shop that sells food supplements and accessories for fitness training.

Data Collection and Analysis
We used a qualitative approach to explore how bodybuilders appropriate BodySpace and integrate it with passion-centric activities offline. We used a triangulation of methods to look at the integration from different points of view: We conducted semi-structured interviews and participant observations – both online on BodySpace and offline in gyms and bodybuilding competitions.

Participant observations allowed us to familiarize ourselves with the various contexts of bodybuilding. This was crucial because we did not have any previous experience in bodybuilding. It allowed us to observe people's actions and to evaluate the interview findings in the field. We conducted these observations during regular workouts in 7 different gyms over 4 months. The gyms varied from "fitness spas" to "hardcore bodybuilding gyms". Furthermore, we visited two bodybuilding competitions. We captured our observations in field notes, which contain photos, maps and our reflections concerning the questions that arose in the course of our study.

Similarly, we conducted online participant observations on BodySpace. Although BodySpace supports covert observation ("lurking") on the website, we decided for ethical reasons [22] to create a BodySpace profile that discloses our identity and affiliation. For 4 months we participated in interactions with the BodySpace community, observed the behavior of people online and captured our observations in reflexive field notes.

We conducted semi-structured interviews with bodybuilders to elicit rich information concerning our research questions. Depending on the scope of the research, samples of 6 to 12 participants have been found to be sufficient to establish the main themes [14]. Using a purposive sampling strategy [26], we sought to recruit participants with varying degrees of experience in their passion, ranging from beginners to professional bodybuilders. Bodybuilders face different challenges at different stages of their bodybuilding career, which affects the motivation and support they seek [29] and thus leads to richer results concerning the appropriation of BodySpace.

We conducted 10 interviews with BodySpace users and 3 further interviews with experienced bodybuilders who are not on BodySpace, as a way to verify our findings (4 female, 9 male; aged between 20 and 56 years). This sample size led to theoretical saturation regarding our research question. The participants had between 2 and 36 years bodybuilding experience with a mean of 12.5 years (SD=10.8). Nine participants had actively participated in bodybuilding competitions, one of them on a professional level. All BodySpace users had established mutual friendship connections with other users on BodySpace, ranging from 8 to 147 friends (mean=56, SD=46). Two participants reported to have a preexisting offline friend on BodySpace. However, in both instances these friends had registered but did not actively use the social network site.

The participants were recruited through a private message on BodySpace and through personal contacts. Our interview guide consisted of open-ended questions about the participants' bodybuilding careers, their use of BodySpace and other websites, and their integration with other activities. We also used information from our participants' profiles as a probe to elicit further discussion on the use of BodySpace. The interviews lasted between 45 and 60

minutes. When possible, we conducted our interviews face-to-face (3), otherwise on the telephone (7) and via email (3). We created verbatim transcripts of all interviews, and we also collected data from the participants' BodySpace profiles. The profiles included personal descriptions, photos, lists of friends and a mean of 89 comments received (SD=67) and 108 comments left (SD=114).

Our analysis was based on a grounded theory approach [8]. We imported the rich set of data including interview transcripts, BodySpace profiles of the participants, field notes from bodybuilding gyms and competitions and field notes from online observations in NVivo 7.0. In an iterative coding process we derived theoretical constructs from the data and created a hierarchical set of themes.

FINDINGS

This section shows how bodybuilders appropriate BodySpace and integrate it with other activities. We give an overview of nine prominent themes, which we combined to three main categories. We use the metaphors of a tool, a theatre and a community to describe these three categories of social networking.

Social Network Site as a Tool

Bodybuilding is not a passion that is related to fun. In order to accomplish their main goal of constant improvement of their bodies, most people have to keep a strict diet and work hard in the gym: *"Working out isn't a hobby or a fun time for me. It is a necessity to stay fit, and I've decided to try and do the best I can with it." (BodySpace user[2] in an online article).* Therefore, some participants use BodySpace mainly as a tool that provides them with some advantage to ease their burden. The advantage arises from the site's capability to store, process and provide information. This includes knowledge about workouts and nutrition, as well as information that helps individuals to judge their progress in the transformation of their bodies.

Knowledge Is Key

"Some think bodybuilders overall are dumb or they just talk, are egotistical and vain, narcissistic. But the truth is, you have to be fairly clever about nutrition, you have to be amazingly dedicated as far as training is concerned." (George, 43, interviewed face-to-face).

Knowledge about the principles of training, nutrition and rest is essential for bodybuilders. Usually, bodybuilders retrieve information from magazines, books, or personal experiences from other bodybuilders. Many bodybuilders have adopted websites like BodySpace as a vital source of information. They obtain information from other bodybuilders who publish details about their training regimes, diets and reviews of food supplements on their

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[2] We anonymized all data in this paper and use pseudonyms for the participants in our interviews.

BodySpace profile. Several participants reported a blend of such online information with other sources: *"My current training is based on advice from a trainer, stuff I've read online and stuff I've read in magazines." (Lenny, 22, interviewed via telephone).*

A major issue in online information is the question of source credibility. The participants reported high trust in information provided by other BodySpace users. They argued that claims made on BodySpace about the effects of supplements and training can be evaluated with the photos and statistics provided on the profile.

Progress-Monitoring

"Well, we are never happy with our bodies...we always want more and more" (John, 28, BodySpace profile).

Bodybuilders aim for continuous transformation of their bodies. Many of them set specific goals for their improvement, e.g., adding 8kg of muscle mass, or reducing the bodyfat to 8 percent. The goals guide them along their transformation, however they also need tools to monitor if they are on track. Some bodybuilders use paper diaries or keep statistics concerning their body measures and lifting stats. Both of these features have been integrated in the BodySpace profile: *"I like how you can compare, how you were and how you are now. And for example, BodySpace has stats. And you can just look and see immediately where you've come and what progress you've made." (Jarvis, 23, interviewed face-to-face).*

However, bodybuilding is about the aesthetics of the human body rather than about the performance in lifting weights. Since improvements are not visible to oneself in the daily training, photos documenting the progress play a vital role in the process of self-monitoring. One participant keeps pictures of herself before she started bodybuilding. When she finds it difficult to motivate herself, these photos reassure her of the progress that she has made: *"I use my before-photos a lot. I have them printed out and I use them to look at those and basically see how far I've come" (Catherine, 24, interviewed via telephone).*

Progress pictures on BodySpace help people to track their own progress. They are also a way of letting other people examine one's accomplishments. The participant who uses her before-pictures at home, shares them also online (see figure 1), which has resulted in a series of comments left on

Figure 1: Progress pictures on BodySpace illustrate the developments made in the person's body transformation.

her profile: *"AWESOME Progress! I only wish I had before photos that detailed! It is a wonderful reminder of what you've done with your body and, of course, what could be if you don't continue!" (Catherine, 24, BodySpace profile).*

Social Comparisons

Comparing oneself with others is essential in any competitive sport including bodybuilding. Whereas other sports use quantitative measures such as time, distance, height or other numerical values for comparisons, bodybuilders rely on subjective judgments of the size, symmetry and proportion of their physiques.

Comparisons can serve various purposes: Firstly, comparisons with people on a similar level help people to evaluate their own performance, e.g., to evaluate their chances in an upcoming competition. Such comparisons take place in the gym as well as online: *"I used to look at competitors to see some photographs from previous competitions to see any photos from guys in my categories. And then I would say,' yeah, I think I'll be ok' or 'it's going to be hard'. I mainly do that." (James, 56, interviewed face-to-face).*

Secondly, people carry out downward comparisons. This means they compare themselves with others who are in a worse position in order to enhance their self-esteem. Downward comparisons take place offline, online or even with people in TV shows. Catherine (24) posted on her BodyBlog, that she was motivated by watching a TV show, which presents teams of overweight contestants trying to lose weight: *"As sad as this sounds, I think watching the biggest loser got me motivated."*

Finally, people engage in upward comparisons, which means they compare themselves with role models that they look up to. Our participants reported various people who they saw as role models: It can be parents, who bring their kids to bodybuilding shows and initiate them to the gym. In other cases, training partners in the gym serve as mentors and role models. For many participants, famous current and former professional bodybuilders have played an important role in their process. Several bodybuilders reported that they started bodybuilding because they were inspired by famous bodybuilders like Arnold Schwarzenegger: *"When I started, the thing that got me into bodybuilding I remember vividly was when I was probably 13, 14 years old, and I saw Arnold [Schwarzenegger] on TV. And he had a body shirt on. I still remember it. He had like this rope things through his arms that were veins. And I had never seen anything like that. I was in a country town, you know, I was never really exposed to anything like it. I remember that night - it changed my world." (George, 43, interviewed face-to-face).* Others express their admiration of role models online: *"My church is a gym, services conducted by Lee Priest, Arnold is god, J.C. Stands for Jay Cutler and Ronnie is Moses! For confessionals, the preacher bench is open!" (BodySpace user's forum signature).*

Social Network Site as a Theatre

For many bodybuilders social network sites serve as a stage like in a theatre, where they present their achievements and gain attention and applause from the audience. The presentation of one's body is a fundamental aspect of bodybuilding online and offline. Bodybuilders train for years to bulk up and then go through months of severe dieting to get in shape to step on stage in a bodybuilding competition. The preparation and the participation in competitions are essential for the identities of many bodybuilders, because they distinguish bodybuilders from other gym users: *"I believe everyone can agree upon the fact that those who choose to compete are a different breed than all other people who call themselves 'bodybuilders'. (...) Not many people want to do what it takes to get onstage. Dieting 12-20 weeks, never missing a meal, cardio everyday, and energy levels so low that you don't feel like getting off of the couch because you are constantly hungry waiting for your next meal does not appeal to the masses." (BodySpace user in an online article).*

Self-Promotion

The main motive of this target group to present themselves is self-promotion, whereby they point out their accomplishments in order to be seen as competent by observers. The accomplishments of bodybuilding lie in the aesthetics of the human body, which some bodybuilders compare with an art form: *"I think, when I'm on there I'm displaying art in motion. Yeah, and it's beautiful, the human body is beautiful. And it is meant to be that way." (David, 32, interviewed via telephone).*

In a similar way BodySpace provides people with an environment to display their accomplishments on their profile through photos, embedded videos and lists of achievements in bodybuilding competitions. Photos show competition photos or favorite parts of their bodies, whereby the quality of the photos varies from professional shots to photos taken in underwear against a mirror in the bathroom (see figure 2).

The motivational value of self-promotion on BodySpace has been indicated by several participants, although not all
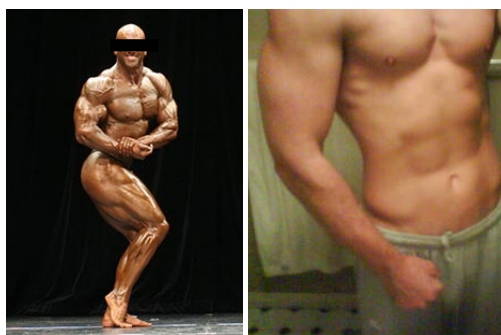
Figure 2: Profiles generally promote the person's favorite body parts. The quality ranges from professional shots to photos taken against a mirror in the bathroom.

participants were as bold in their expression as the following statement: *"Another thing I've got to say about BodySpace which I think is the most important thing to most of us - It gives us a place to post our picture for the whole world to see. Bodybuilders need to be noticed. It feeds our muscle ego; it motivates us. There are thousands of guys who show photos of themselves in their bathroom in their underwear flexing. They aren't thinking about anything but to show off what they look like and to see for themselves what they look like. This all might be strange to the non-bodybuilding world but not to us – it's normal."* (John, 28, via Email).

Appraisal

Self-presentation is not just posing on stage or posting pictures or videos online; it is an element of social interaction in the process of which the audience provides some sort of feedback. In bodybuilding shows competitors earn applause from the audience, get votes from the judges and feedback from comparisons with other competitors. Furthermore, some people get feedback in the gym from other bodybuilders. However, in many cases bodybuilders work out in gyms with no fellow bodybuilders or the culture in the gym prohibits open feedback. In such cases, BodySpace can be an environment to display pictures of one's body and to exchange feedback via comments on the profile or personal messages: *"You won't exactly walk up to a person at the gym and ask 'Hey, how do I look' and expect an honest answer. Here [on BodySpace], you will get judged on how you really look. Then you can improve on the negatives, and get the motivation from positive comments."* (BodySpace user comment to a blog).

We identified various functions of appraisal in the comments left on BodySpace profiles. The comments included expressions of empathy, e.g., *"We all know how much dedication, determination, discipline go into creating the ultimate body! You're well on your way to perfection."*, praise, e.g.: *"Hey great upper body, great bulk on the arms and chest definition!!!"*, and reinforcement of behavior like: *"Great Traps! You are looking great, keep at it, it's working!"*

Some people used the comments to actively seek appraisal. They left multiple comments on other people's profiles, e.g., to point out their achievements in a current competition or draw attention about photos they recently posted online. We also found instances of BodySpace comments of people requesting critical examination of their progress, in order to improve their physiques for a competition *"I'm getting ready for a big competition in May, check my profile and gallery and give me feedback and constructive criticism. Tell me where I need to improve. Thanks!"* (BodySpace user comment).

Self-Presentation beyond Bodybuilding

Due to the desire to promote their accomplishments, bodybuilders are often associated with stereotypes of vanity, or the impression that their lives evolve exclusively around bodybuilding. However, one participant said: *"We are like anyone else, just a little bigger"* (George, 43, interviewed face-to-face). The lives of most bodybuilders also include families, careers, and other interests as central aspects. Therefore, people appropriate BodySpace also beyond the intended purpose of bodybuilding. On the fringes people present and discuss family issues, soldiers in Afghanistan mingle political and fitness issues (see figure 3a), and others create profile photos according to special events, such as Christmas (see figure 3b).

An issue under debate on BodySpace is whether some of the photos on BodySpace show bodybuilding or sexual poses. This issue has been fostered by the design of the BodySpace start page, which presents recently updated and the 6 most popular profiles. Therefore users are persuaded to update their profiles regularly and some post provocative photos to gain popularity: *"All the girls on the top profiles have semi-pornographic shots of themselves or there faces, It's like a popularity contest. If you make it to the top 6 or whatever it is it should be because you have a phenomenal physique or made a great transformation not only for your face or porn pic."* (BodySpace user comment to a blog).

Social Network Site as a Community

Many bodybuilders see BodySpace not just as a theatre to present their accomplishments in order to get applause and appraisal. They describe a feeling of belonging to a community, resulting from ongoing discussions that have led to personal relationships with others.

The personal relationships among bodybuilders are a complex subject matter. Bodybuilding magazines, books and documentaries often describe a sense of strong camaraderie among bodybuilders in the gym, which has been supported by some participants: *"It was not just about being strong and fit. It was a lifestyle sort of thing. It was a way of being a part of a community almost. Through working out you develop new friendships in the gym."* (Mario, 20, interviewed via telephone). At the same time the bodybuilding literature describes bodybuilding as a competitive, individualist activity, which creates an interesting mix at bodybuilding competitions: *"And there is a psychological battle going on backstage when you pump up in the pump up room. You look at the other guy and*

Figure 3: a) Soldiers use BodySpace to blend political and fitness issues. b) Profile photos can combine bodybuilding with special events like Christmas.

assess his physique. Hey, I've got better legs than him, or bigger biceps. (...) There is a sense of camaraderie at the same time. (...) When you are lining up just to go on stage, we all turn to each other and say 'Good luck man!' You can't really touch each other, because there is the tan and you don't want to mark your body, so you shake your hand. It's a genuine appreciation of each other's physique and good luck." (David, 32, interviewed via telephone).

Furthermore, bodybuilding is a minority sport. Therefore, many bodybuilders report bodybuilding competitions are a place to meet like-minded, whereas they lack contact with like-minded people elsewhere: *"In my work life people have no idea I'm a competitive bodybuilder, they mostly think I may lift weights to stay in shape. Even at the gym I train at there are only one or two fellow competitors who understand the discipline and mindset involved in bodybuilding competition."* (Simon, 40, interviewed via email). Therefore, many people use the BodySpace community to alleviate isolation from other bodybuilders by fostering friendships, the exchange of support and the maintenance of shared values.

Online Friends
Bodybuilders usually develop friendships with peers in the gym: *"People pretty much work out at the same time on the same day. So when you are regular you tend to see the same people. You can form friendships around the training, which is good."* (Bill, 27, interviewed via telephone). Two of the participants work out with a friend as training partner to support them in their training. However, due to convenience all other participants work out alone. For them the gym is a place to work out, social aspects are secondary and conversations occur only before and after the workout.

Due to the limited number of offline relationships in the gym, the participants in this study did not use BodySpace to keep in contact with friends from the gym or other aspects of their everyday lives. Only two participants reported to have an offline friend on BodySpace, but these friends had only registered without using the social network site. Four participants reported to use other social network sites in order to network with offline friends. They used MySpace or Facebook to keep in contact with their offline friends, whereas they used BodySpace to make new acquaintances with like-minded peers: *"On BodySpace everyone is there together for the same purpose. And you know mostly that the people who have joined are going to give you vital information, or people are going to ask. And people are motivated by the same thing. And I find that a great way to find people with the same goals and aspirations."* (Mario, 20, interviewed via telephone).

Most relationships remain limited to BodySpace. In the interviews, the participants often referred to them as "acquaintances" rather than "friends". Acquaintances keep track of each other's progress and exchange comments concerning informational and motivational aspects. Some

participants used acquaintances as a resource that they could ask for advice on training and nutrition.

In addition to online acquaintances, some people formed relationships with others online which over time transgressed the boundaries of BodySpace. People interact with those friends either via other communication technologies, e.g., instant messengers, or they even meet face-to-face. One participant reported that he found several bodybuilders from his area on BodySpace who he met offline: *"One has become a really special close friend whom I never would have met if I wasn't on BodySpace."* (John, 28, interviewed via email).

Exchanging Support
A major challenge for bodybuilders is the preparation for a contest. Especially the combination of training and dieting constitutes a physical and mental challenge: *"Towards the end it is real hell."* (James, 56, interviewed face-to-face). Thus, some bodybuilders interact with the community to obtain or to provide some sort of support.

We distinguish between three forms of support: Firstly, emotional support includes esteem support, validation of progress as well as companionship. Secondly, instrumental support contains all forms of tangible or material aid, such as spotting (assisting) in weight training or slapping up fake tan backstage in competitions. One participant even reported an instance of financial (and emotional) support. Her fiancée supported her in giving up her job so that she could concentrate exclusively on her training. Finally, we refer to informational support in instances where people exchange advice, such as training regimes or experiences with food supplements.

BodySpace cannot provide instrumental support. However, for many people it provides more convenient access to emotional and informational support. One professional bodybuilder used BodyBlog to thank another professional bodybuilder for his emotional support in response to steroid allegations on an online discussion forum: *"Last night I stumbled upon a forum thread basically devoted to whether or not I was natural. Now I don't know a single person who posted, but there were over three pages of statements that I am a liar and a cheat who uses steroids! Initially I was enraged, but soon realized just who these cowardly internet people are. To my surprise, Jay Coleman emailed me a short note of support, as he must have seen some of these same forum posts. This guy has been dealing with this sort of thing his whole career, so I really appreciated his help."* (Simon, 40, on his BodyBlog).

The participants stressed the perceived quality of informational support on BodySpace as compared to other bodybuilding websites. The profile information allowed participants to find out more about the support provider and to see if the support providers were successful bodybuilders or not. Thus people reported a higher degree of trust in people's advice as compared to online forums, which have

a high degree of anonymity. Bodybuilders appreciated the opportunity to ask for information from more experienced or even professional bodybuilders on BodySpace: *"When I first started I browsed through a lot of the profiles to see who was the elite on the site. I was very surprised that most of them if not all would reply pretty quickly. You come across a bloke that has a great back and send a message to him and ask: 'What methods do you use for your back?' And they would send you a message back, mostly pretty detailed as well." (Mario, 20, interviewed via telephone).*

Community Values

Underlying the interactions within every community is the co-creation and maintenance of common values. Basic principles of bodybuilding are for example the "3 D's", which stand for "Dedication, Determination, Discipline" regarding training, nutrition and rest. This norm is shared in the bodybuilding world in interactions with peers as well as through articles in bodybuilding magazines, interviews of role models or through slogans posted in the gym (see figure 4). Bodybuilding gyms present the accomplishments of successful bodybuilding stars on the walls all over the gym to reinforce the principles (see figure 4).

Similarly, profiles and comments on BodySpace reflect the values of the community. The BodySpace profile displays the user's goal as a headline on top of the page, which carries slogans like *"Train Harder, Faster. Eat Better and Feel Leaner!" (Catherine, 24, BodySpace profile).* The profile self-description also includes a forum signature, which many users appropriate to communicate slogans like *"Nothing is impossible!" (Monica, 35, BodySpace profile).* Finally, the comments left on profiles frequently contain slogans that reflect the general attitude of bodybuilders, like *"If it was easy everyone would do it." (Rhonda, 24, BodySpace profile).*

Like in other communities, some topics are a taboo and not talked about in public spheres such as BodySpace. In the case of bodybuilding, the use of performance-enhancing drugs like steroids constitutes such a taboo. Steroids support the building of muscle, but they are illegal in most countries due to the associated health risks. Many bodybuilders argue that without steroids it is impossible to

Figure 4: The walls of bodybuilding gyms present slogans and accomplishments of role models.

create a physique to compete on a professional level in bodybuilding: *"Everyone knew, as unwritten knowledge, everyone who wanted to compete at the highest level, you either took the steroids or you couldn't compete, you weren't going to win. And everyone still understands that." (James, 56, interviewed face-to-face).* However, steroids are not discussed on BodySpace, because most information on BodySpace is publicly available and can be tracked back to a person's profile.

DISCUSSION

The question we seek to answer is how people appropriate online and offline resources to support passion-centric activities where offline ties are absent.

The findings in the context of people passionate about bodybuilding show that they appropriate the social network site for three main purposes: Firstly, people use the social network site as a tool to extend their capabilities. They exchange knowledge online and integrate it with information from magazines, books, and accounts of other people's experiences. The social network site helps them to monitor their progress in the pursuit of their passion and to compare their progress with others. Secondly, like on a stage in a theatre, people appropriate the social network site to promote accomplishments. The social network site provides them with a place to show off their results and an audience to appraise the accomplishments. Thirdly, people form new relationships with others on social network sites. Thus the social network site provides them with a community of like-minded that extends their offline connections with peers, friends and coaches. The online community provides support and reinforces the values underlying the passion.

Theoretical Implications

This paper contributes to our understanding of online communities, in particular social network sites, in two ways: Firstly, it provides empirical evidence for the claim that social network sites are deeply entwined with people's offline experiences [1, 5]. The novelty of this study is that it is focused on passion-centric social network sites, whereas previous work has investigated socially-organized social network sites like Facebook or MySpace. On these sites people usually socialize with their current circle of friends or keep in touch as they move from one offline community to another [4, 11, 16, 19]. Our findings indicate that the close integration of offline and online life does not rely on preexisting offline ties. In the absence of such ties, passion-centric activities become the link between offline and online life. People engage in interactions with strangers online to exchange information, discuss their progress or provide support for activities related to their passion. In some instances friendships established online have migrated also to offline environments.

Secondly, this study contributes to our understanding of social support amongst competitors through social network

sites. Competitiveness in gyms and contests often prevents mutual support and can lead to social isolation offline. While bodybuilders compete offline, they collaborate online and exchange social support. The ways in which bodybuilders exchange social support are similar to other online communities, e.g., in health-related contexts [31]: Bodybuilders look for similar people online, they provide various forms of support and thereby they create a sense of belonging to a community. Related to social support, our findings indicate that the ability to identify people through public profiles and their links with friends on the social network site facilitate trust, as stated by Donath [9, 10]. Beyond that, competitiveness may enhance online collaboration because it fosters self-promotion. Self-promotion is a form of self-presentation whereby people show their accomplishments in order to be seen as competent by observers. Self-promotion on social network sites triggers appraisal, which motivates individuals for their offline activities. Thus, our findings extend previous theory on motivational and social support through online communities [13, 17, 31] with the theme of self-promotion.

Practical Implications
The finding that passion-centric social network sites are closely integrated with offline activities provides an important contribution to practice. This is significant, because passion-centric social network sites can help people to develop aspired behaviors, such as the development of healthy habits. In the absence of offline ties that share or support these habits, social network sites can help to alleviate the isolation and foster offline behaviors.

Our findings highlight several design factors that are based on a close integration of offline and online life in order to support passion-centric activities. Indeed, for some bodybuilders the passion may lead to undesirable outcomes, e.g. overtraining or steroid use [23, 30, 32]. However, many bodybuilders are role models for a healthy lifestyle based on regular training and a healthy diet. We believe that the following design factors are applicable to the design of passion-centric social network sites for other groups that aspire such a healthy lifestyle, such as people who want to lose weight or improve their fitness.

From a tool perspective, passion-centric social network sites can facilitate a close integration of offline and online life by integrating offline tools in the profile page. BodySpace, for example, integrates offline tools such as statistics, progress photos, diaries (blogs) as well as tools to set goals and monitor the progress. People integrate these tools into their routines according to their individual needs. By using such tools online, people share their personal information with others. This fosters online collaboration and benefits offline activities.

From a theatre perspective, social network sites can foster self-presentation by actively highlighting updates and popular profiles for the entire community. BodySpace, for example, uses the start page to promote recently updated as well as the most popular profiles. In such a way, social network sites persuade people to update their profiles frequently and thereby support a close integration of online and offline statuses, which helps people to stay on track.

From a community perspective, low degrees of anonymity and high transparency are critical factors for the formation of relationships among strangers on passion-centric social network sites. Photos, personal descriptions and links to friends on the profile hinder anonymity. BodySpace achieves transparency by displaying interactions like comments and login dates on the profile and by prohibiting options that would constrain the visibility of people's profiles. As a result BodySpace has developed a very positive and supportive atmosphere with hardly any negative comments. At the same time, transparency and low anonymity help to restrict the discussion of controversial issues, such as performance-enhancing drugs.

CONCLUSIONS
We studied a passion-centric social network site for bodybuilders and investigated how activities online and offline are integrated in the absence of ties that link these worlds. The findings show that the social network site is deeply embedded in activities related to the users' passion of bodybuilding. The site helps them to get motivation for their trainings and in the preparation for competitions.

This paper extends previous work, which looked at socially-organized social network sites and emphasized the importance of preexisting offline connections with friends. Our findings show that in the absence of such ties on passion-centric social network sites, people use passion-centric activities to link offline and online life.

The close integration of online and offline life makes social network sites well suited to help people develop aspired behaviors. Looking at the successes and the problems of bodybuilders, we present design factors for social network sites that foster the development of healthy habits.

ACKNOWLEDGMENTS

REFERENCES
1. Beer, D. Social network(ing) sites…revisiting the story so far: A response to danah boyd & Nicole Ellison. *Journal of Computer-Mediated Communication*, *13*, 2 (2008), 516-529.

2. boyd, d. Friendster and publicly articulated social networking. *Ext. Abstracts CHI 2004*, ACM Press (2004), 1279-1282.

3. boyd, d. Friends, Friendsters, and MySpace Top 8: Writing community into being on social network sites. *First Monday*, *11*, 12 (2006). http://www.firstmonday.org/issues/issue11_12/boyd/

4. boyd, d. Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Social Life. in D. Buckingham ed. *Youth, Identity, and Digital Media*, MIT Press, Cambridge, MA, (2008), 119-142.

5. boyd, d. and Ellison, N. Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, *13*, 1 (2007), 210–230.

6. Consolvo, S., Everitt, K., Smith, I. and Landay, J. A. Design requirements for technologies that encourage physical activity. *Proc. CHI 2006*, ACM Press (2006), 457-466.

7. Consolvo, S., Paulos, E. and Smith, I. Mobile persuasion for everyday behavior change. in B. Fogg and D. Eckles eds. *Mobile persuasion: 20 perspectives on the future of behavior change*, Stanford Captology Media, Stanford, CA, (2007), 77-86.

8. Corbin, J. M. and Strauss, A. L. *Basics of qualitative research: Techniques and procedures for developing grounded theory*. SAGE, Los Angeles, CA, 2008.

9. Donath, J. Signals in social supernets. *Journal of Computer-Mediated Communication*, *13*, 1 (2007), 231–251.

10. Donath, J. and boyd, d. Public displays of connection. *BT Technology Journal*, *22*, 4 (2004), 71-82.

11. Ellison, N., Steinfield, C. and Lampe, C. A. The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, *12*, 4 (2007), 1143-1168.

12. Eyck, A., Geerlings, K., Karimova, D., Meerbeek, B., Wang, L., Ijsselsteijn, W., de Kort, Y., Roersma, M. and Westerink, J. Effect of a Virtual Coach on Athletes' Motivation. *Proc. Persuasive 2006*, Springer (2006), 158-161.

13. Fogg, B. *Persuasive technology: Using computers to change what we think and do*. Morgan Kaufmann, San Francisco, CA, 2002.

14. Guest, G., Bunce, A. and Johnson, L. How Many Interviews Are Enough?: An Experiment with Data Saturation and Variability. *Field Methods*, *18*, 1 (2006), 59-82.

15. Hausenblas, H. A., Brewer, B. W. and Van Raalte, J. L. Self-presentation and exercise. *Journal of Applied Sport Psychology*, *16*, 1 (2004), 3-18.

16. Joinson, A. N. Looking at, looking up or keeping up with people?: Motives and use of facebook. *Proc. CHI 2008*, ACM Press (2008), 1027-1036

17. Khaled, R., Barr, P., Noble, J. and Biddle, R. Investigating social software as persuasive technology. *Proc. Persuasive 2006*, Springer (2006), 104-107.

18. Kim, K.-H. and Yun, H. Cying for me, Cying for us: Relational dialectics in a Korean social network site.

19. Lampe, C. A., Ellison, N. and Steinfield, C. A face(book) in the crowd: Social searching vs. social browsing. *Proc. CSCW 2006*, ACM Press (2006), 167-170.

20. Leary, M. R. Self-presentational processes in exercise and sport. *Journal of Sport and Exercise Psychology*, *14*, 4 (1992), 339-351.

21. Lin, J., Mamykina, L., Lindtner, S., Delajoux, G. and Strub, H. Fish'n'Steps: Encouraging Physical Activity with an Interactive Computer Game. *Proc. UbiComp 2006*, Springer (2006), 261-278.

22. Markham, A. N. The methods, politics, and ethics of representation in online ethnography. in N. K. Denzin and Y. Lincoln eds. *The Sage Handbook of Qualitative Research*, SAGE, Thousand Oaks, CA, (2005), 793-820.

23. Monaghan, L. F. *Bodybuilding, drugs, and risk*. Routledge, New York, 2001.

24. Mueller, F. F., Agamanolis, S. and Picard, R. Exertion interfaces: Sports over a distance for social bonding and fun. *Proc. CHI 2003*, ACM Press (2003), 561-568.

25. Mueller, F. F., Stevens, G., Thorogood, A., O'Brien, S. and Wulf, V. Sports over a distance. *Personal and Ubiquitous Computing*, *11*, 8 (2007), 633-645.

26. Neuman, W. L. *Social Research Methods: Qualitative and Quantitative Approaches*. Allyn and Bacon, Boston, MA, 2006.

27. Ploderer, B., Howard, S., Thomas, P. and Reitberger, W. "Hey world, take a look at me!": Appreciating the human body on social network sites. *Proc. Persuasive 2008*, Springer (2008), 245-248.

28. Segerstahl, K. and Oinas-Kukkonen, H. Distributed user experience in persuasive technology environments. *Proc. Persuasive 2007*, Springer (2007), 80-91.

29. Smith, D. Psychology and bodybuilding. in J. Dosil ed. *The sport psychologist's handbook: A guide for sport-specific performance enhancement*, Wiley, Chichester (2005), 617-639.

30. Smith, D. and Hale, B. Exercise-dependence in bodybuilders: Antecedents and reliability of measurement. *Journal of Sports Medicine and Physical Fitness*, *45*, 3 (2005), 401-409.

31. Tanis, M. Online social support groups. in A. N. Joinson, K. Y. A. McKenna, T. Postmes and U.-D. Reips eds. *The Oxford Handbook of Internet Psychology*, Oxford University Press, Oxford, UK, (2007), 139-153.

32. Wright, S., Grogan, S. and Hunter, G. Motivations for anabolic steroid use among bodybuilders. *Journal of Health Psychology*, *5*, 4 (2000), 566-571.

33. Zajonc, R. B. Social facilitation. *Science*, *149* (1965), 269-274.

Journal of Computer-Mediated Communication, *13*, 1 (2007), 298-318.

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Appendix D.3   Interactions Magazine

Ploderer, B., Wright, P., Howard, S., & Thomas, P. (2009). "No pain, no gain": Pleasure and suffering in technologies of "leidenschaft". *Interactions, 16*(5), 6-11.

No Pain, No Gain: Pleasure and Suffering in Technologies of *Leidenschaft*

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"I broke my foot. I was leg pressing at about 1,450 pounds and ... the bone just snapped. But I had to keep it up. I couldn't flex my leg properly. I couldn't walk without crutches for probably three months. ... I was still training, and I competed, too. I trained my left leg and I trained my upper body, and I still competed at the European championships. I left the crutches in the hotel room and put on a strong face."

—Francis, age 30

Training for bodybuilding competition is clearly a serious business that inflicts serious demands on the competitor. Not only did Francis commit time and money to compete, but he also arguably put winning before his physical well-being—enduring pain and suffering from his injury. Bodybuilding may seem like an extreme example, but it is not the only activity in which people suffer in pursuit of their goals. Boxers fight each other in the ring; soccer players risk knee and ankle injuries, sometimes playing despite being hurt; and mountaineers risk their lives in dangerous climbs. In the arts there are many examples of people suffering to achieve their goals: Beethoven kept composing, conducting, and performing despite his hearing loss; van Gogh grappled with depression but kept painting, finding fame only posthumously; and Mozart lived the final years of his life impoverished but still composing. These examples show that many great achievements come at a price: severe suffering.

Hegel described the driving force behind such activities as *leidenschaft*, the German word for passion. He wrote that "nothing great in the world has ever been accomplished without passion." We prefer the word *leidenschaft* to passion because it combines "suffering" (*leiden*) with the single-minded pursuit of a goal (*schaffen*). Leidenschaft encompasses more than what people loosely call their interest, hobby, or passion. Originally, passion described the dual nature of pursuit and suffering, but it has become a term that nowadays describes only pleasurable things like outbursts of emotion or romantic love.

The duality of leidenschaft has strong practical significance because it provides a fertile ground for the design of technologies. People embrace technologies that help them pursue their goals. Equally, suffering opens up opportunities and new challenges for technologies. However, it is unclear how interactions with and through technologies influence the duality of pursuit and suffering, and vice versa.

This article addresses this gap by presenting the findings from a field study of a bodybuilding social network site in relation to leidenschaft. By surfacing the technology features and their implications, we strive to guide the design of technologies for other *leidenschaften*—

Pursuit

Achievement	Belonging	Devotion
Performance	**Connection**	**Commitment**
Limitations	Isolation	Sacrifice
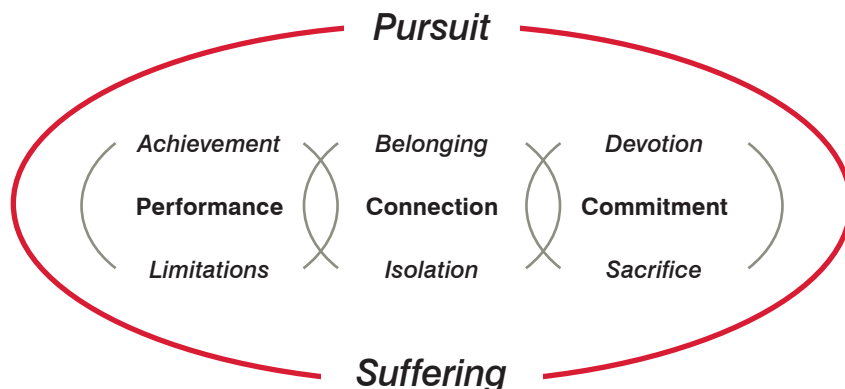
Suffering

▶ Figure 1: The duality of pursuing a goal and suffering contained in a leidenschaft unfolds in three interrelated ways—people strive for achievements, but struggle with their limitations; they seek belonging with others engaged in the same activity, but isolate themselves from the public; and they devote themselves to their activities, but must make sacrifices.

[1] Ploderer, B., Howard, S., and Thomas, P. "Being Online, Living Offline: The influence of social ties over the appropriation of social network sites." In *Proceedings of the ACM 2008 Conference on Computer Supported Cooperative Work* (2008): 333–342.

may it be playing the piano, competing in a triathlon, or any other activity people value.

The Three Elements of Leidenschaft

We observed members on BodySpace, a social network site specifically for people involved in fitness and bodybuilding. Similar to other social network sites like Facebook, BodySpace allows people to craft their profiles, establish connections, and communicate with other users through posts, private messages, and blogs. Additionally, BodySpace offers features such as training statistics and progress pictures to help bodybuilders keep track of their training. There is also a supplement store to generate revenue via the member network.

In order to understand the meaning behind the interactions on BodySpace and the site's significance for bodybuilding, two of us (Ploderer and Thomas) also worked out in a gym. We observed bodybuilders in various gyms, attended bodybuilding competitions, and interviewed 25 bodybuilders in the U.S. and in Australia. The triangulation of methods online and offline has enabled us (as nonbodybuilders) to acquire an

understanding of social network sites and bodybuilding itself.

Our findings show that the duality of leidenschaft unfolds in three interconnected ways: First, bodybuilders work hard to improve their performance and strive for a certain achievement; second, they seek connections with others sharing the same leidenschaft; and finally, bodybuilders invest time, work, and money in their leidenschaft and develop a commitment to it. All three aspects gravitate toward a positive end, but each also exposes suffering: The pursuit of achievements surfaces one's limitations; seeking connections with a group comes at the cost of isolation from others; and committing to a passion also implies sacrificing other things for it. As illustrated in Figure 1, these three aspects constitute dualities that reflect the larger duality of pursuit and suffering contained within a leidenschaft. Here, we use the case of bodybuilding to elaborate on these three dualities, and building on our previous work, we will discuss how the dualities open up opportunities for the design of technologies [1].

Leidenschaft and Performance. One element of leidenschaft is

that people strive for an achievement. Bodybuilders strive to transform their bodies in order to compete in bodybuilding shows, where they have to simultaneously look both muscular and lean. To gain muscularity, amateur bodybuilders usually work out in the gym once or twice a day, six days a week. Four to six times a day, they eat very healthy and regimented food, including various food supplements to grow their muscles. In order to get lean while keeping their muscle size for a competition, they go through what one of our participants, Bill, 27, called the "hell of preparation."

Over three to four months they maintain training intensity while gradually decreasing their food consumption. They literally starve in order to get their body fat down to 7 percent (women) or 3 percent (men). Such a low energy state can have severe physical and emotional consequences. Our participants reported that it is almost impossible for them to pursue their jobs or maintain long conversations. However, this is the condition that is necessary to enter a bodybuilding competition. While preparing backstage for a competition, they eat sweets, which spike their blood-sugar levels, giving them the energy needed to step onstage. Tanned, oiled, blinded by the strong lights, and almost naked, they pose for 10 to 15 minutes for the judges, a small audience of fellow bodybuilders, and applauding fans.

Competition forces bodybuilders to confront their limitations. This can lead to severe inner conflicts, as expressed by one of our participants, John, 28: "Well, we are never happy with our

bodies; we always want more and more." No matter how much they improve, there is always someone else who delivers a better performance. Thus, the challenge is to remain aware of current abilities and limitations and prepare for the future performance to which they aspire.

The duality around performance creates opportunities for the design of tools that help people move one step closer to their goals. Tools provide access to information, which leads to improved performance. BodySpace is such a tool. It offers a mix of articles about training and dieting drawn from professional writers and users of the system. This information can have an immediate impact on training, but more important, it helps bodybuilders to plan ahead and establish goals. Setting short-term goals and tracking progress is a way of negotiating the duality of performance. On BodySpace, bodybuilders can set their goals, track their progress with statistics and photos, and write about their aims and current status in their blogs. BodySpace saves this information permanently and creates user histories that allow individuals to keep track of their progress. Their true value, however, unfolds when users share their histories with others. It becomes meaningful information from which others can learn and derive motivation, and with which they can compare themselves.

Inversely, such tools also surface a person's limitations. One of our participants, Lenny, 22, said he was not making enough progress in his training. Comparing his progress

with others on BodySpace, he came to the conclusion that "it might be wise to have a break and then start again." But many participants criticized the lack of critical feedback in interactions with other BodySpace users. Bodybuilders need critical feedback to work on their limits, but as Jeremy, 50, pointed out: "They are so nice that they can't give you constructive criticism, because they are like 'I don't want to be mean or step on your toes' when they probably need it. So it's limited in the information you get."

These examples illustrate that people use tools to coordinate, improve, and sometimes also to reassess their quests for performance. However, the tendency to use tools for achievements can prevent critical feedback, which would help in dealing with limitations.

Leidenschaft and Connections. A second element of leidenschaft is to seek connections with others who perform the same activity. Bodybuilders establish connections at the gym and at competitions—although the competitiveness and hierarchies at these places often complicate initial contact. Though scarce, these connections help people to obtain valuable information and motivational support. Beyond that, connections provide a sense of belonging to a community that shares the same interests, empathizes with one's suffering, and normalizes the sometimes painful activities.

Connecting with a community that shares the same leidenschaft also means the risk of social isolation from the larger community. The ascetic lifestyle of bodybuilders is

not compatible with everyone else's way of life, as expressed by Jeremy: "You don't hang out with people that aren't on the same page, that aren't into the same lifestyle. Because they are drinking and smoking and eating bad foods and doing crazy stuff." Even most typical gym users cannot relate to the specific norms and activities of bodybuilding. As a result, many bodybuilders describe a sense of social isolation: "I was a lone, lone wolf," says Jeremy about his early days at the gym. "It's a very isolated, individual sport."

The duality around connection opens up opportunities for technologies to establish and nourish communities based on a shared leidenschaft. Social network sites like BodySpace allow people to establish personal networks within the bodybuilding community. Our findings indicate that beginner bodybuilders in particular use BodySpace to establish connections with other bodybuilders, because their circle of friends often has no interest in bodybuilding.

A major challenge in establishing connections online is trust. We would like to emphasize three interrelated design decisions that have contributed to a generally positive and trustful environment on BodySpace:

1. BodySpace users are identifiable through their profile information, which is important in establishing contact. Bodybuilders judge other BodySpace users based on the physical achievements displayed in photos and their congruence with other profile cues, like bodybuilding jargon or statistics.

2. BodySpace profiles provide transparency about friendship

requests. Confirmed friendship requests are listed as "friends." Unreciprocated requests are displayed as "stalking" on the profile of the person who sends the request, and as "fans" on the other person's profile. Such information helps to prevent spam requests and facilitates respect online.

3. BodySpace is designed as an open space to outsiders. Anyone can view profiles and observe any exchange of information (with the exception of private messages). The decision against privacy controls on BodySpace is important, because any leidenschaft carries the risk of obsessive behavior. While most bodybuilders live a very healthy lifestyle, some bodybuilders have developed pathologies such as overtraining, the consumption of performance-enhancing drugs, or distorted body image. BodySpace's open and public design has engendered an atmosphere that eschews such lifestyle choices. People interested in steroids, for example, usually congregate on private websites.

While BodySpace appears successful in providing a sense of belonging within the bodybuilding community, it slightly shifts the focus of social isolation. BodySpace has been successful in opening up the website to recreational gym users, who use it to lose weight or keep in shape. The interactions between bodybuilders and recreational gym users have fostered the exchange of knowledge and recognition across these groups, but they have also led to new tensions, e.g., what kind of photography or language is appropriate. Beyond

that, few professional bodybuilders use BodySpace, partly due to the lack of privacy. Most professionals have private websites controlled by their sponsors. Some professional bodybuilders also use Facebook, where they can keep their profiles restricted to their friends and redirect their fans to a public fan page. On BodySpace, however, amateur bodybuilders remain largely isolated from the most experienced people in their community.

Leidenschaft and Commitment. The final element of leidenschaft is the commitment people develop. Commitment grows out of investing in your passion, whether it is time, money, or hard work. Bodybuilding magazines suggest that every bodybuilder can be as successful as Arnold Schwarzenegger, as long as they commit to the "3 Ds of bodybuilding: Determination, Dedication, Discipline." Bodybuilders show the "3 Ds" in their consistent training and in their regimented diets. They transform their bodies in radical ways and they suffer for their passion by going through the "hell of preparation." They sometimes also sacrifice jobs, social relationships, and even their health because they are committed to what they do. Asked why they endure such a demanding lifestyle, bodybuilders tend to say they "love" it, which expresses the devotion that grows out of the commitment. Equally, many bodybuilders use the words "obsession" or "addiction" to describe their relationship with bodybuilding. These labels underline the inherent duality of devotion and sacrifice that bodybuilders

have to negotiate as a result of their commitment.

The issue of commitment opens up a design space for technologies that may be the most challenging of the three dualities presented in this article. Our findings show that BodySpace indirectly helps address this duality. BodySpace provides a theater in which people exhibit both aspects of the duality on a public stage. People display their devotion on BodySpace with slogans and photos, but they also share their training or diet sacrifices through blogs on their profiles. Moreover, BodySpace provides an empathic audience and rewards members with recognition for their commitment.

Two design features of BodySpace promote empathy and recognition: BodySpace has a news feed similar to Facebook's that keeps people up-to-date with events in their network of friends. And BodySpace highlights user updates and the most popular profiles on the home page. In this way, bodybuilders get rewarded with attention, which reinforces their commitment. John offers this insight: "Bodybuilders need to be noticed. It feeds our muscle ego; it motivates us. There are thousands of guys who show photos [on BodySpace] of themselves in their bathroom in their underwear flexing. They aren't thinking about anything but to show off what they look like and to see for themselves what they look like. This all might be strange to the nonbodybuilding world, but not to us—it's normal." The social status of appearing as a top profile is sometimes also rewarded

with fame beyond the website. BodySpace invites popular members to professional photo shoots with the intention of being featured in bodybuilding magazines like *Flex* or *Iron Man* to promote the website. This means that not only hard work in the gym but also self-promotion on BodySpace can lead to fame and strengthened commitment.

The flipside of success and popularity on BodySpace is that people predominantly present themselves in positive ways and leave out the negative accounts of sacrifice. It is easy to find competition success stories. People share accounts of defeats or injuries to a lesser degree on BodySpace, and it is virtually impossible to find a blog entry in which someone admits withdrawing halfway through the preparation for a competition.

Conclusion

Passion and leidenschaft have long been a central issue in philosophical debates about human values. With the recent renaissance of human values in HCI [2, 3], leidenschaft has also become a genuine issue for interacting with and through technologies. Our research makes a contribution to the debate on human values in HCI by relating leidenschaft with the use of existing technologies. Leidenschaft inherits three interrelated dualities, and technologies both reduce and increase them. People utilize technologies as tools to improve their performance—tools that help them work toward goals—but they fall short in managing personal limitations. People engage with online communities that provide a sense of belonging but

also pose challenges in terms of trust and may even further social isolation. People also adopt technologies as theaters to display their commitment to an activity. The theater provides an audience for accounts of devotion, but often lacks accounts of sacrifices.

The practical significance of the dualities lies in the implications for the design of technologies for other leidenschaften. The major discrepancy in the case of bodybuilding is that BodySpace succeeds in addressing the pursuit of a leidenschaft in all its ways—achievement, belonging, and devotion—but is limited in incorporating the management of the various sufferings—limitations, social isolation, and sacrifice. Our findings indicate that users of BodySpace must find other ways to deal with suffering, often with the help of a close bodybuilding friend or on their own. The main lesson learned for the design of new technologies for passion-centric activities is that focusing on the positive aspects of a pursuit is not enough. Addressing both sides of the duality opens up opportunities for technologies that might be radically different from current ones. Tools that capture progress and achievements also need to reflect the limitations of people and support critical and constructive reflection. Community technologies must focus on strengthening trust within the community. Beyond that, technologies should support the exchange of information across communities in order to stimulate innovation and to break up misconceptions. Having a tool and community

that encompass both aspects of the duality also facilitates a theater where devotion and sacrifices are displayed and appreciated. Addressing these challenges with a holistic view is crucial, because technologies and leidenschaften shape each other and affect fundamental aspects of being human: how we spend our time and energy, how we feel about ourselves, and how we relate to others.

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Bernd Ploderer is a doctoral student at the University of Melbourne and a visiting student at Sheffield Hallam University. Ploderer is interested in CSCW outside the traditional office workplace. His current research explores how people orchestrate social network sites with other resources to pursue their passions.

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[2] Le Dantec, C.A., Poole, E.S., and Wyche, S.P. "Values as Lived Experience: Evolving value sensitive design in support of value discovery." In *Proceedings of the 27th international Conference on Human Factors in Computing Systems* (2009): 1141–1150.

[3] Sellen, A., Rogers, Y., Harper, R., and Rodden, T. "Reflecting Human Values in the Digital Age." *Communications of the ACM* 52, 3 (2009): 58–66.

Appendix D.4 Journal of Computer Supported Cooperative Work (CSCW)

Ploderer, B., Howard, S., & Thomas, P. (2010). Collaboration on social network sites: Amateurs, professionals and celebrities. *Computer Supported Cooperative Work (CSCW), 19*(5), 419-455.

Collaboration on Social Network Sites: Amateurs, Professionals and Celebrities

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Abstract.   Amateurs are found in arts, sports, or entertainment, where they are linked with professional counterparts and inspired by celebrities. Despite the growing number of CSCW studies in amateur and professional domains, little is known about how technologies facilitate collaboration between these groups. Drawing from a 1.5-year field study in the domain of bodybuilding, this paper describes the collaboration between and within amateurs, professionals, and celebrities on social network sites. Social network sites help individuals to improve their performance in competitions, extend their support network, and gain recognition for their achievements. The findings show that amateurs benefit the most from online collaboration, whereas collaboration shifts from social network sites to offline settings as individuals develop further in their professional careers. This shift from online to offline settings constitutes a novel finding, which extends previous work on social network sites that has looked at groups of amateurs and professionals in isolation. As a contribution to practice, we highlight design factors that address this shift to offline settings and foster collaboration between and within groups.

Key words: amateurs, bodybuilding, career, celebrities, collaboration, community, leisure, passion, professionals, social network sites

1. Introduction

In recent years millions of people have adopted social network sites like Facebook, MySpace or LinkedIn. On these sites people present themselves on profile pages, they establish ties with other users and exchange messages with them. These interactions on social network sites are often deeply entwined with people's leisure and work (Boyd and Ellison 2007).

Previous CSCW research has addressed social network sites in both leisure and work. In the context of leisure, previous studies of social network sites have investigated their value for interactions with friends (Joinson 2008; Lampe et al. 2006, 2008) and leisure activities (Miller and Edwards 2007; Ploderer et al. 2008). Studies in the context of work have shown how co-workers use social

network sites for collaborative projects and career climbing within an organization (DiMicco et al. 2008; Steinfield et al. 2009).

While the body of research in these two areas has been growing, little is known about social network sites for domains where the boundaries between work and leisure blur. Amateurs in art, science, sport, or entertainment carry out activities in their leisure that constitutes paid work for their professional counterparts. Ongoing involvement and achievements can turn amateur careers into professional ones and beyond, with the most established professionals becoming celebrities in their respective domain.

This paper presents a 1.5-year field study on the collaboration between and within amateurs, professionals and celebrities on a social network site for bodybuilders. All three groups engage in similar activities of training and dieting in order to compete in bodybuilding shows, yet their skills, social connectedness and financial dependence on the sport varies considerably. Accordingly, our findings show some common themes of online collaboration across amateurs, professionals and celebrities, but also highlight the differences between them. Amateurs use social network sites for their training and to establish friendships with other bodybuilders. Professionals and celebrities appropriate social network sites to promote their work and achievements, but they generally find friends and support for their training offline.

This shift of collaboration from social network sites towards offline settings along the career path constitutes a novel finding with significant implications for CSCW: First, it extends previous knowledge on social network sites for work and leisure activities (DiMicco et al. 2008; Miller and Edwards 2007; Ploderer et al. 2008; Steinfield et al. 2009) by showing how professional work and leisure blur. Second, it surfaces the limitations of collaboration on social network sites for amateurs, professionals and celebrities. Finally, it highlights important challenges in designing for online collaboration like transparency and the need to promote achievements to all users of social network sites and beyond.

In the next section, we review related work on social network sites for amateurs and professionals. That is followed by a discussion of the research context and our research approach. In the findings section we describe the similarities and differences in the online interactions between amateurs, professionals and celebrities. We conclude the paper by discussing how the findings extend previous work on social network sites and by raising the implications of our findings for the design of other social network sites for serious leisure activities.

2. Collaboration of amateurs and professionals

Activities of amateurs and their professional counterparts challenge simplistic distinctions between leisure and work. Drawing from theory in the social sciences we describe the relationships between amateurs and professionals and explain

how people develop careers within their domain. We then review the growing number of CSCW applications for amateurs and related professionals and discuss how these groups use social network sites.

2.1. Framing amateurs and professionals

Stebbins' (2007)'serious leisure perspective' provides a framework to discuss the relationships between amateurs and professionals, and to distinguish them from other types of leisure and work. Serious leisure is usually based on regular activities that require skills, knowledge and commitment. Unlike other forms of leisure that are more casual or short-lived, serious leisure occupies an important and permanent space in the lives of participants and offers them opportunities for personal development and careers (Stebbins 1992).

Amateurs may engage in serious leisure activities in art, science, sport, and entertainment. In contrast to other serious leisure activities like collectors or birdwatchers, amateurs have professional counterparts that provide inspiration and offer career opportunities. In the absence of financial incentives, amateurs are motivated by self-gratification and social status in the domain (Stebbins 1979).

Professionals on the other hand make a living based on similar activities that are carried out by amateurs for little or no remuneration. This type of professionalism refers to artists, athletes, or entertainers who perform for the public, in contrast to client-centered professionals like lawyers or engineers (Stebbins 2007). The financial insecurity in these public-centered areas causes many professionals to supplant their income with teaching or other jobs. Often only the leaders in their domain—the celebrities—are free from tensions over balancing financial insecurities (Stebbins 1992).

Celebrities are important as role models for the careers of amateurs and professionals alike. Though not all amateur careers turn professional, and typically only very few reach celebrity status, the careers of celebrities provide a sense of what is achievable and therefore desirable within a domain. Such paradigmatic trajectories are likely to influence the careers of amateurs and professionals (Wenger 1998).

Career development at all levels relies on the development of skills, knowledge and experience through continuous participation in the respective domain (Stebbins 2007). Lave and Wenger's (1991) discussion of career trajectories in the context of 'communities of practice' further highlights the importance of developing an identity in addition to acquiring the necessary skills. Communities of practice are social groups defined by a shared enterprise, like a shared interest, activity or passion, rather than a shared location (Lave and Wenger 1991). The artists, scientists and athletes discussed in the serious leisure context (Stebbins 2007) vividly illustrate the communities of practice concept, because they all share an understanding about what they are doing and its meaning for their lives, (Lave and Wenger 1991). The careers of amateurs and professionals can be

further described by their status in the community of practice: Experienced members like professionals or celebrities have a rather central status in the community, but new inventions or new events force them to keep progressing. New members like amateurs are in a peripheral position. They have to develop their skills and identity through ongoing participation in the shared activities, which allows them to move towards more central positions (Lave and Wenger 1991). All these activities require collaboration with others, which highlights the potential of technologies to facilitate the collaboration between amateurs, professionals and celebrities.

2.2. Collaborative technologies for amateurs, professionals, and celebrities

Previous work in CSCW has examined the role of discussion forums, wikis and other online technologies in facilitating collaboration amongst amateurs, professionals and celebrities. Studies of amateur craftspeople, photographers or radio enthusiasts have shown that online technologies play a critical role in sharing information (Torrey et al. 2009) and facilitating communication and learning (Bogdan and Bowers 2007; Bogdan and Mayer 2009). Amateurs use online technologies to coordinate group activities like competitions and to negotiate criteria to judge each other's work by (Grinter 2005).

Online technologies have not only supported traditional amateur activities but also created new outlets for amateur work, i.e., for creative work and knowledge work. On the one hand, authoring tools support the collaboration of creative communities (Bardzell 2007; Bruckman 2002; Davis and Moar 2005; Luther and Bruckman 2008) and the distribution of their work to the public (Cook et al. 2009). On the other hand, online technologies like Wikipedia rely on amateurs together with professionals who voluntarily contribute their knowledge (Nov 2007). Ensuring the quality of information on Wikipedia constitutes a challenge to its contributors (Kittur and Kraut 2008), however their effort is rewarded with highly visible contributions (Butler et al. 2008) and for some individuals it even provides a benefit for their professional career (Nov 2007).

Similarly, CSCW work has investigated creative work and knowledge work of professionals. Recent studies have examined how creative workers appropriate technologies to support creativity and coordinate tasks through shared workspaces (Martin et al. 2009; Vyas et al. 2009). Websites like Mechanical Turk help companies to outsource knowledge work to large numbers of individuals on the Internet, yet they raise new challenges in evaluating the quality of the outcome (Kittur et al. 2008).

Collaborative technologies harness new opportunities for amateur and professional work as well as for celebrities. Celebrities benefit from online discussions in fan communities, which help to promote their work (Baym 2007). Often fan sites are set up and run by the fans themselves who seek to establish a relationship with the celebrity (Baym and Burnett 2009).

2.3. Social network sites for amateur and work contexts

In the past few years millions of individuals have integrated social network sites into their practices. They use them to present themselves online, to connect with their friends and colleagues, or to network with strangers based on shared interests and activities. Social network sites focus on individuals and their personal networks, which sets them apart from other online technologies like discussion forums, wikis or blogs (Boyd and Ellison 2007; Ellison et al. 2009).

   Previous scholarship has predominantly studied 'friend-based social network sites' like Facebook and MySpace, investigating how people use them to maintain relationships with existing ties (Burke et al. 2009; Gilbert et al. 2008; Lampe et al. 2008), and the benefits and risks that arise in their use (Binder et al. 2009; Brown et al. 2008; Joinson 2008; Lewis et al. 2008). Only a few studies have investigated how social network sites facilitate the activities of amateurs, professionals or celebrities.

   Amateurs usually congregate on so-called 'passion-centric social network sites' (Boyd and Ellison 2007). On these sites a shared passion facilitates connections and collaboration amongst strangers—people who have no offline connections. These strangers provide valuable support and recognition for the achievements of individuals (Ploderer et al. 2008). For example, studies of Flickr suggest that it provides new means for amateur photographers to connect with others, engage in discussions around photos and equipment, and to present their work to the public (Miller and Edwards 2007; Van House 2007).

   Research on social network sites within organizations indicates that professionals use them to keep in touch with colleagues as well as to create new relationships with others in their organization (Chen et al. 2009; Steinfield et al. 2009). These online connections help people to get to know their colleagues better (DiMicco et al. 2008), but they can also create tensions, in particular, when private and professional spheres intersect (Skeels and Grudin 2009). Moreover, professionals participate in social network sites for career purposes to build up recognition as experts and to establish connections with people at the top management level, who could benefit their careers (DiMicco et al. 2008).

   The music scene provides anecdotal evidence for social network sites used by celebrities. According to Wired Magazine (Howe 2005) bands like 'My Chemical Romance' have risen to celebrity status via MySpace. Many other bands try to follow their example and use social network sites like MySpace or Last.FM to promote their music to fans and record labels. Established celebrities in the music scene have adopted social network sites to facilitate communication to their fans and amongst them (Beer 2008).

   Overall previous research shows that social network sites successfully support networking, collaboration and career development within groups, may it be groups of amateurs, professionals or celebrities. Despite their shared career trajectories, much less is known about how social network sites facilitate

collaboration *between* amateurs, professionals and celebrities within a domain. To address this gap, this study examines how amateurs, professionals and celebrities collaborate on a single social network site and draws out the differences in their online behaviors. In the next section we describe the context of our study and the methods used.

3. Research site and approach

Similar to the work reviewed in the last section, this study aims to investigate how social network sites support collaboration *within* groups of amateurs, professionals and celebrities. Beyond that, this study aims to illicit how social network sites facilitate also collaboration *between* these three groups. We seek to unpack the relevance of social network sites for the personal development of amateurs, professionals and celebrities, and we highlight the differences between these three groups in the ways they participate online.

3.1. Research site and context

The context of this study is bodybuilding, which like many other sports has a large group of amateurs but also allows for professional careers and for some to reach celebrity status. We distinguish between gym users and bodybuilders, because their motives differ significantly. Gym users usually work out to get fit or to improve for another sport (Crossley 2006), whereas bodybuilders use the gym to shape their physiques for competitions (Klein 1993). Thus we use the term 'bodybuilder' only to refer to people who compete in bodybuilding shows.[1]

Bodybuilding requires a strict lifestyle of daily weight training, diet and sufficient sleep to grow the muscles. Many bodybuilders are role models for healthy living, though some develop pathological behaviors, such as drug use, exercise dependence, or body image disorders (Monaghan 2001; Smith and Hale 2005; Wolke and Sapouna 2008). Even healthy engagement in bodybuilding runs the risk of social isolation due to the high demands on their time and the social stigma of the sport (Probert 2007). The demands involved in bodybuilding competitions and the possible pathological outcomes highlight the serious nature of this leisure activity.

Bodybuilding is well suited for the aims of this study because it has a single dominant social network site called BodySpace[2] that connects bodybuilders at all stages of their career from amateurs to celebrities. BodySpace currently has more than 400,000 registered users worldwide, who have a profile page to present themselves and to establish publicly articulated friendships with other users. BodySpace users can post comments on other profile pages and send private messages through BodySpace. Additionally, BodySpace profiles offer various bodybuilding specific features: They contain descriptions of goals and achievements in bodybuilding shows, workout programs, and reviews of food

supplements. Profiles include a photo gallery and links to videos on YouTube. Bodybuilders can use BodySpace to keep statistics about their weight training and their body, e.g., the size of their arms. Finally, they can share their experiences in trainings and competitions through a blog on their profile. All this information is public and searchable through BodySpace.

BodySpace is part of the larger bodybuilding website Bodybuilding.com, which provides comprehensive information on all aspects of bodybuilding from training methods to competition results. BodySpace and Bodybuilding.com are free to use because they are integrated with an online shop that sells food supplements and accessories for fitness training.

3.2. Data collection and analysis

We conducted a field study to understand the practices of bodybuilders and their collaboration on social network sites. The field study ran in two phases from September 2007 to February 2009. We carried out phase 1 in Australia, where bodybuilding is predominantly an amateur activity. We continued phase 2 in California to extend our study to professional bodybuilders. Professional bodybuilding originated in California and to date it is the cultural and commercial center of the bodybuilding world (Hotten 2004; Klein 1993).

Our field study approach combined offline and online participant observation with semi-structured interviews. We conducted offline participant observations at five amateur bodybuilding shows and one professional bodybuilding show, and we worked out and observed bodybuilders in 15 gyms in both field study locations. The gyms varied from gyms for the general public to 'hardcore' bodybuilding gyms to better understand the relationships amongst bodybuilders and other gym users. We captured our observations in field notes, which served as primary data for our analysis and guided our interviews and online observations.

We conducted online participant observations on BodySpace and BodySpace-related websites on Bodybuilding.com throughout the entire field study. Though BodySpace is publicly accessible for anyone, the first author created a BodySpace profile that revealed his real name, his affiliation as a researcher and a link to a website that explained the aims of the study. We did this to disclose our presence and intentions to other users of the website following recommendations for online research ethics (Ess and AoIR Ethics Working Committee 2002; Hookway 2008). Furthermore, it allowed us to appropriate the features for our own training and to collaborate with other users on BodySpace. We logged on to BodySpace on a daily basis and collected online data using the Mozilla Firefox extension Scrapbook. Scrapbook saves online data on the local hard disc and supports annotations. We used this data for our analysis and for our interviews.

Finally, we used semi-structured interviews to discuss the relationship between bodybuilding careers and the use of BodySpace. We conducted interviews with 22 BodySpace users and three further interviews with bodybuilders who are not

on BodySpace to extend and to verify our findings (18 male, 7 female, ranging from 20 to 56 years). Using a purposive sampling strategy we recruited bodybuilders at different stages of their career (Neuman 2006). We contacted them via a private message on BodySpace or through personal contacts. The participants had between 2 and 39 years of bodybuilding experience (median=9). Table 1 gives an overview of all participants showing their occupations and their bodybuilding career stage: 11 of the participants were amateurs and conducted bodybuilding as a leisure activity; 12 participants were professionals who made a living from bodybuilding-related jobs like personal training; 2 participants were

Table 1. List of participants sorted by career stage and their pseudonym.

Name	Sex	Age	Career stage	Occupation	Location	Interview mode
Catherine	f	24	amateur	unemployed	Australia	telephone
David	m	32	amateur	accountant, personal trainer	Australia	telephone
James	m	56	amateur	business manager	Australia	face-to-face
Jarvis	m	23	amateur	student, musician	Australia	face-to-face
John	m	28	amateur	landscaper	USA	email
Juliet	f	47	amateur	journalist	USA	face-to-face
Keith	m	38	amateur	teacher	USA	face-to-face
Lenny	m	22	amateur	student	Australia	telephone
Mario	m	20	amateur	student	Australia	telephone
Nicole	f	41	amateur	research scientist	Australia	face-to-face
Paul	m	21	amateur	Student	Australia	face-to-face
Andy	m	30	professional	personal trainer, gym manager	USA	face-to-face
Bill	m	27	professional	firefighter, personal trainer	Australia	telephone
Chris	m	30	professional	personal trainer, fitness model	USA	face-to-face
Erica	f	40	professional	personal trainer	Australia	telephone
Francis	m	30	professional	personal trainer	USA	telephone
Jeremy	m	50	professional	personal trainer	USA	face-to-face
Mark	m	48	professional	personal trainer	USA	telephone
Melvin	m	25	professional	personal trainer	USA	face-to-face
Monica	f	35	professional	personal trainer	Australia	email
Rhonda	f	24	professional	personal trainer	Australia	telephone
Tim	m	43	professional	nurse, personal trainer	USA	face-to-face
Wendy	f	23	professional	personal trainer	USA	face-to-face
George	m	43	celebrity	gym owner, contest promoter	Australia	face-to-face
Simon	m	40	celebrity	pro-bodybuilder, personal trainer	USA	email

We use pseudonyms and anonymized all photos to protect the privacy of our study participants

celebrities in the scene, who had established themselves as a professional competitor or as an organizer of professional competitions respectively. We complemented our insights on celebrities with online data, observations at bodybuilding competitions and through the insights of four of the professionals, who were well connected to the bodybuilding elite and aspiring to become celebrities themselves ('pros' in their terminology). When possible, we conducted the interviews face-to-face in Australia and California (13), otherwise via telephone (9) or via email (3). The interviews lasted between 60 and 90 minutes and led to data saturation regarding our research question. We transcribed all data for later analysis.

We also collected the interview participants' BodySpace profiles for our data analysis. The profiles included personal descriptions of their bodybuilding activities and goals, photos, videos, lists of friends and comments. The participants had between 4 and 238 mutual friends on BodySpace (median= 61). Only 8 participants reported that they have contact with some of their BodySpace friends at bodybuilding shows or at the gym. The number of comments they received ranged widely from 2 to 217 (median=63), as did the number of comments they left, ranging from 2 to 386 (median=78). The profiles showed that all participants had visited BodySpace within the last 2 weeks before we interviewed them. The interview data further indicated that the frequencies of their BodySpace use ranged from daily use to monthly use.

We used a grounded approach to analyze the rich set of data consisting of field notes, online data and interview transcripts. Throughout the study we wrote analytic memos to develop initial ideas about codes and their relationship (Miles and Huberman 1994). At the end of each phase of data collection we imported all data into the analysis software NVivo 7.0 for coding. We followed a three-step process of open, axial and selective coding to reduce the data and to establish analytic themes regarding our research question (Neuman 2006). The analysis in phase 1 led to our initial themes (tool, community, theater), which describe how people collaborate on social network sites. In phase 2 we extended and refined these themes to draw out the differences between amateurs, professionals and celebrities. The next section describes these themes in detail.

4. Findings: social network sites and bodybuilding careers

Our findings show that amateurs, professionals and celebrities in the bodybuilding scene use BodySpace. Our analysis was based on the following concepts to define these groups:

- 'Amateurs' carry out activities in their spare time, and (unlike their professional counterparts) they are usually motivated by pleasure rather than financial incentives (Stebbins 2007). As listed in Table 1, the occupations of the amateurs in this study ranged from students to accountants, and they all worked out and competed in their spare time.

- We defined 'professionals' as "someone who is dependent on the income from an activity that other people pursue with little or no remuneration as leisure" (Stebbins 2007, p. 6). Most professionals in this study worked as personal trainers and dietitians, mentoring others for a living. Although these jobs are bodybuilding-related, they do not hold the same prestige as being a professional athlete (who we classified as 'celebrity') (Klein 1993).

- We classified those participants as 'celebrities', who were widely known in the bodybuilding scene. Simon, for example, has won a so-called 'IFBB pro-card', which gives him access to the elusive circle of bodybuilders who compete at a professional level. Another celebrity—George—has retired from competing, but he owns a prestigious bodybuilding-gym. The career trajectories of Simon and George have been very different, yet both of them have achieved something that has made them well known in the scene.

As discussed by Stebbins (1979, 2007), the boundaries between these groups are not always clear-cut: To resolve ambiguities like part-time professionals, we distinguished between professionals and amateurs depending on whether their main income was bodybuilding-related or not. Furthermore, in Section 4.3.3 we discuss a sub-group called 'aspiring celebrities' to account for individuals where the boundaries between professionals and celebrities were blurred.

The findings show that social network sites facilitate collaboration between and within these three groups in various ways. Our data analysis surfaced three major themes—tool, community, and theater—which we use to structure the collaboration we saw on social network sites:

- A 'tool' refers to any instrumental form of collaboration on social network sites, like information exchange, progress monitoring, or comparisons. Tools increase a person's capabilities and help them to carry out their leisure and work activities to accomplish their goals.

- The term 'community' describes social aspects of online participation, such as making friends online and empathizing with other people's experiences. Our use of the term 'community' is influenced by Lave and Wenger's concept of a 'community of practice' (1991). Such a community does not imply co-presence or strong ties amongst people—all it implies is a group of individuals that is loosely bound by its shared interest, activities and values.

- The term 'theater' is inspired by Goffman's metaphor of social situations as theatrical performance (1959). We share the interest in how people perform like actors on a stage in order to present themselves in a particular way in public social settings, but we have a more narrow focus: We examine how people use social network sites as a stage to promote their achievements to an audience of friends and strangers, and how they gain recognition.

In the following sections we use these themes to illustrate how collaboration differs between amateurs, professionals and celebrities, and how collaboration shifts from social network sites to other avenues as they advance in their careers.

4.1. Amateurs

"I couldn't remember anything. I would talk to you and 2 seconds later I wouldn't remember what I said. I lost my memory, I really lost my memory. It was so frustrating, because I was like, what am I saying? And I would try to talk myself into a memory of what it was. I went to the doctor. He looked at me and said, 'where is your body? You don't have any bodyfat, eat some carbs!' I ate some carbs and my memory came back. That was frightening!" (Juliet)

Amateur bodybuilders occupy full time jobs and compete in bodybuilding shows in their leisure. The serious nature of this leisure activity is vividly illustrated by the severe physical and mental challenges involved in training and dieting during the preparation for competitions, often described as the *"hell of preparation"* (James). Bodybuilders build up a strong physique through daily weight training and 5–8 precisely measured meals per day. They increase their training load in the 10–12 weeks preceding a competition whilst they reduce their food consumption. In other words, they starve in order to get lean while they try to maintain their musculature. Most participants reported that they were so weak that they found it difficult to carry out their jobs, and two of them said that they literally lost their minds.

The following section on tools illustrates how amateur bodybuilders utilize social network sites to address the enormous physical challenges they face during the preparation phase. Our findings illustrate that the preparation has also serious implications for the social relationships of bodybuilders. Section 4.1.2 unpacks the role of social network sites in establishing relationships and exchanging support, and Section 4.1.3 discusses how bodybuilders utilize social network sites to present themselves and to exchange recognition for their hard work.

4.1.1. *Social network site as a tool to improve performance*

"Well, we are never happy with our bodies. We always want more and more." (John)

Amateurs use social network sites because they provide various kinds of tools that help them improve their performance in bodybuilding competitions. Winning competitions allows them to progress to the next level, may it be national, international or professional competitions. Thus they continuously look for better training regimes and food supplements that help them to transform their physique.

Amateur bodybuilders participate in BodySpace to exchange information about training and nutrition. They read articles, reviews and training regimes written by

other users, ask questions through comments and personal messages, and integrate this information into their training practices:

> "My current training is based on advice from a trainer, stuff I've read online and stuff I've read in magazines." (Lenny)

Often changes in the physique are not visible to oneself in the daily training. Thus bodybuilders use BodySpace to track their progress during their competition preparation to peak at the day of the competition. BodySpace profiles contain statistics to track body measures and the amount of weight they lift. BodySpace also incorporates a progress photo section, where bodybuilders can upload photos over a period of time to document their progress visually (see Figure 1a).

Some amateurs had used progress pictures and statistics at home and in the gym prior to using them on BodySpace. Sharing this information online allows them to compare their performance with others to an extent that was not possible before social network sites: 'Upward comparisons' with established bodybuilders provide inspiration and help to set goals for the future. 'Downward comparisons' with less accomplished people help some to feel better about their own achievements. Catherine, for example, commented that she was motivated by watching a TV show that presents teams of overweight contestants trying to lose weight: *"As sad as this sounds, I think watching the biggest loser got me motivated."* Comparisons with bodybuilders on the same
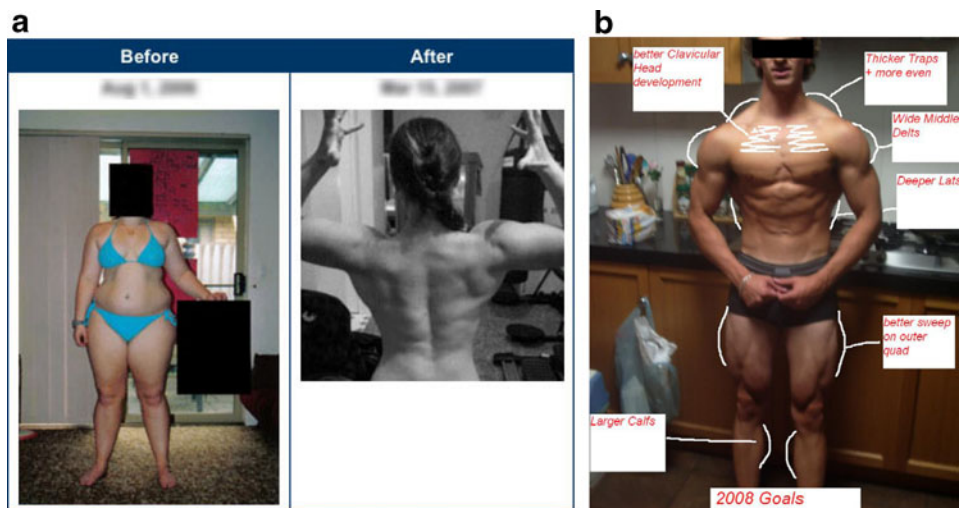

Figure 1. **a.** Progress pictures on BodySpace visually illustrate the changes in the person's physique during the preparation for a competition. **b.** Amateurs use photos to ask for critical feedback, but BodySpace appears limited in facilitating critical exchange.

level help amateurs to judge their own progress and to calculate their chances in upcoming competitions:

> "I look at it to see photographs from previous competitions to see any photos from guys in my category. And then I would say, 'yeah, I think I'll be ok' or 'it's going to be hard'." (James)

Social network sites used as tools help to enhance one's performance, but the online collaboration also has its limitations. Several participants pointed out the lack of critical feedback on BodySpace, which they need to critically examine their progress. Some participants left comments on other people's profiles to explicitly ask for critical feedback. One study participant—Paul—edited his progress photos in Photoshop to highlight the areas he wanted to improve and needed feedback on while preparing for his first competition (see Figure 1b). He was hoping for critical, reflective feedback, like from a personal trainer or an experienced training partner. However, the comments he received were *"looks fine already, you don't need to make changes"* or *"it looks good",* and he concluded, *"it didn't really work for me"* (Paul).

### 4.1.2. *Social network site as a community to find friends and exchange support*

> "I was a lone, lone wolf. It's a very isolated, individual sport." (Jeremy)

The second challenge for many amateurs is their isolation from peers. Bodybuilding is a minority sport and most amateurs have very few if any offline interactions with other bodybuilders. They meet their peers at the rare occasions of competitions and at gyms. However, there are only few dedicated bodybuilding gyms, and many bodybuilders train in gyms with few or no other competitors:

> "I used to go to the big gyms. There are thousands of people that go to such a gym per day. And out of the people that I saw there, only one or two were people that had similar goals to me with bodybuilding. And it was even harder to find a female, because there is such a stigma about women putting on muscle." (Wendy, reflecting on her beginnings as an amateur)

Due to their social isolation bodybuilders use social network sites to establish online relationships with others in the community. On BodySpace they can search for new connections or discover other members on the BodySpace homepage. The number of BodySpace friends ranged from 10 to 223 friends amongst the 11 amateurs, but only two people had a BodySpace friend who they considered a friend offline. These numbers support our observations that amateurs use BodySpace predominantly to establish new relationships with strangers online.

A major challenge in establishing friendships online is the issue of trust. Bodybuilders judge other BodySpace users based on the personal information on the profile, connections with other users, and the physical achievements displayed in photos. As illustrated in Figure 2, BodySpace profiles provide high

Friends Stats

Fan Club (?) : 3
Mutual Friends (?) : 207
Stalking (?) : 9
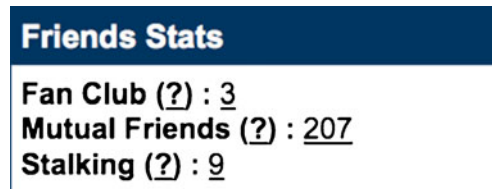
Figure 2. BodySpace profiles list all 'mutual friends' and unreciprocated friendship requests to increase transparency and to discourage spam requests. The 'fan club' contains other BodySpace users whose friendship requests have not been reciprocated by this user. Conversely, this user has added nine people as friends who have not reciprocated the request (listed under 'stalking').

transparency about friendship requests. People who request friendship on BodySpace are only listed as 'mutual friends' if the request is accepted. If the request gets ignored or rejected, then the person sending the request is listed as 'fan' on the receiver's profile, and as 'stalking' the other person on his or her own profile. This prevents spam requests and facilitates connections amongst those who are serious about bodybuilding.

At first sight, the community theme appears to be less integrated with people's everyday lives than the tool theme. Since most BodySpace relationships were purely online, some participants viewed BodySpace as a place where they can informally chat with like-minded people about shared interests, but with relatively little influence on their everyday lives. Nicole, for example, is a busy researcher and mother of two kids. She logged on to BodySpace twice a week to exchange messages with other BodySpace users, and she compared this activity with watching TV, which helps her relax in her very limited spare time:

> "We don't watch much TV. We don't have much downtime, because exercise for us is a priority. So for us to chat on the Internet, to use the wireless to sit on the couch and chat late at night, it's downtime." (Nicole)

Upon closer examination, however, we found that the interactions with BodySpace friends provide important support for people's offline activities, in particular during the preparation for competitions. In addition to informational support discussed in the previous section, comments on BodySpace can provide emotional support to endure intense training and dieting. Other bodybuilders on BodySpace can relate to the challenges involved in the preparation phase and provide a sense of empathy:

> "There are not a lot of people in regular society that can relate to what is going in the preparation for a competition. The diet is really socially awkward. You have to have your meals, usually five times a day, to make sure you are eating every 2–3 hours. You have to measure everything prior, and you have to take your food with you. If you want to do a show, then

there is no room for missing a meal or eating too much of one thing. And you have people all the time 'come on, you are in great shape, you can have one slice of pizza'. And it's really easy to hear that and say 'you are right'. But if you want to do a show, you got to stay strict. BodySpace is a space to talk to people who do the same thing and they can say 'I had the same thing happen'. You can help each other, that's what it is about, more than anything." (Keith)

Empathy and support on social network sites reaffirm the values within the community. We use the term 'values' in a broad sense to refer to what is important for individuals or a community as a whole. Pictures and slogans posted in bodybuilding gyms bring some of the values inherent in bodybuilding to the foreground and reinforce them (see Figure 3). Similarly, profiles and comments on BodySpace reflect the values of the community through slogans like *"Nothing is impossible!"* (Monica) or *"If it was easy everyone would do it."* (Rhonda). Exchanging these messages on BodySpace reaffirm the activities of bodybuilders:

"It makes you feel like you are not alone; it makes you feel normal because other people do it as well. Maybe, they give you a sense of legitimacy to what you are doing." (Jarvis)

BodySpaceused as a community provides opportunities for bodybuilders to enhance their support networks, but the online collaboration also has its limitations. Online friends provide critical support, but they cannot replace the ongoing instrumental and emotional support of training partners or coaches in

Figure 3. The walls of bodybuilding gyms present slogans and accomplishments of role models, which reaffirm the values within the bodybuilding community.

the gym. Beyond that, the values conveyed on BodySpace seem to reaffirm the marginal status of bodybuilders in the public eye. Our findings show that amateur bodybuilders often have to justify their regimented lifestyles during the contest preparation, and some of them even have to argue against stereotypes like steroid use or narcissism. The participants in this study felt that people who do not compete cannot relate to the challenges involved in training and diet, the motivation to shape the body in such a way, and the achievements in competitions:

> "I don't talk about my bodybuilding at work because I think people think it's strange. So they know I do it, but I try not to [bring it up], it's sort of not professional in that sense. (…). So it's not the norm, it's not the normality. People can't understand it. So, it's not like you are going for a fun run, where people say 'that's great!' Bodybuilding competitions, they don't understand it. So in a way it's a bit socially isolating. The other thing is, when you go out for dinner, you have to scan the menu for stuff you can eat. It's also socially isolating. Also, I don't really drink, just because it's anti-calories. So I might have one drink, but I don't normally drink something. So in a way, it's very socially isolating." (Nicole)

4.1.3. *Social network site as a theater to promote achievements*

> "A lot of these guys have nothing else in their lives. They don't have a good job. So it gives them kudos, it gives them self-affirmation, or affirmation from other people." (James)

Amateur bodybuilders make enormous sacrifices during the 'hell of preparation' without receiving any financial benefits from their participation in bodybuilding shows. They invest large amounts of money and time for their training and nutrition, and they endure severe physical and mental challenges in order to compete. Beyond that they sacrifice social relationships and risk social stigma. The sacrifices of many years pay off when bodybuilders get to present their body on stage in competitions:

> "I reckon that was one of the best days in my life, just being up there. You work so hard. You train for years, but those last few months of dieting, when you are up there it's like the best feeling of achievement; you feel like a million dollars; it's great!" (Paul)

Many bodybuilders use social network sites like a stage in a theater, where they present their achievements to a wide audience. They use BodySpace to share photos, videos and descriptions of their achievements in bodybuilding competitions in order to be seen competent by observers. The photos vary from pictures taken with a camera phone in front of the mirror to professional photos taken during competitions or photo shoots. As illustrated in Figure 4, new photos and other profile updates get listed on the BodySpace homepage and on their friends'
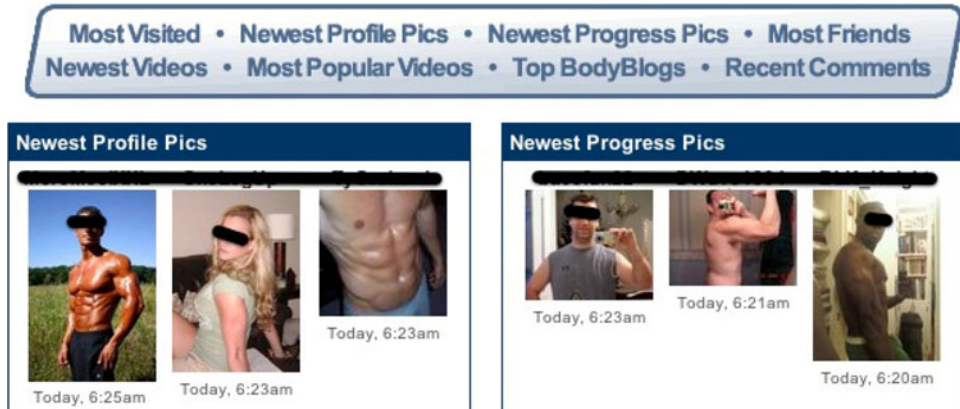
Figure 4. The BodySpace homepage lists the most recent profile updates, including the newest profile photos and progress pictures shown in the screenshot above, as well as new videos, statistics and comments. This feature rewards participants who keep their profiles up-to-date with attention by other BodySpace users. Furthermore, the list contains the six most visited profiles of each day to showcase the most popular BodySpace users.

newsfeed. This feature encourages users to keep their profile up-to-date with their offline activities, and beyond that, it evokes attention and feedback:

> "Another thing I've got to say about BodySpace which I think is the most important thing to most of us—it gives us a place to post our picture for the whole world to see. Bodybuilders need to be noticed, it feeds our muscle ego, it motivates us. There are thousands of guys who show photos of themselves in their bathroom in their underwear flexing. They aren't thinking about anything but to show off what they look like and to see for themselves what they look like. This all might be strange to the non-bodybuilding world but not to us—it's normal." (John)

Attention and feedback on BodySpace have different functions. Our online data included expressions of empathy, e.g., *"We all know how much dedication, determination, discipline go into creating the ultimate body! You're well on your way to perfection."*, praise, e.g.: *"Hey great upper body, great bulk on the arms and chest definition!!!"*, and reinforcement of behavior like: *"Great Traps! You are looking great, keep at it, it's working!"* Such feedback is important, because it comes from people who engage in the same activities and can recognize the value of achievements in this domain.

The interplay of self-promotion and feedback on BodySpace provides valuable recognition, but it also surfaces problems in online collaboration. One problem is that people predominantly present positive aspects and leave out accounts of struggling or suffering. Only few participants reported that they use BodySpace to write about the difficulties during the preparation for competitions.

A second problem on BodySpace is that many comments allude to the sexual attractiveness of people rather than their bodybuilding achievements. Like many other women in this study, Nicole reported that she received ambiguous comments from other BodySpace users. Although Nicole tried to keep her bodybuilding life separate from her work, she even received a phone call from another BodySpace user who found her work telephone number online:

"From being a female on BodySpace, I really like using it to talk to people that are actually training for competitions, and that's why I joined it. But there are obviously guys there who just want to pick you up, or make suggestive comments. And what happens usually is that I wouldn't reply to them. But a guy actually rang me at work about 2 weeks ago from Italy. (…) He called me up at my office phone here, because he saw me through BodySpace and wanted to chat. To me, that's not acceptable." (Nicole)

Also three male participants reported that they received messages on Body-Space that contained both male and female propositions. They explained that bodybuilding attracts so-called 'muscle groupies', who are usually not competi-tors, but visit bodybuilding shows and BodySpace because of their inclination for muscular bodies:

"Think about us on stage—a bunch of near naked men in front of total strangers; think about the fact there must be some people out in the crowd who are looking at you not only as a bodybuilder but as a sexual being." (John)

4.2. Personal trainers and other professionals

"I wouldn't be a trainer if I hadn't started being a bodybuilder when I was 12 years old. I can't think of doing anything else, except not working at all." (Jeremy)

Some bodybuilders turn their passion for the sport into a profession. They still compete in their leisure time, but they use their knowledge and their physique to work as personal trainers, dietitians, gym managers or photo models. Their lives evolve around fitness training and bodybuilding, as indicated by Francis (30), a bodybuilder, personal trainer and bodybuilding judge:

"It's my life. From the minute I get up in the morning to the minute I go to bed, everything evolves around the sport. The work that I do is bodybuilding related, my training, my diet."

Professionals enjoy the full immersion in the bodybuilding world, but they also rely on it to make a living. The financial pressure changes their passion, and their main concern often shifts from their performance in competitions to their

professional career. Thus, professional bodybuilders also use social network sites differently from amateur bodybuilders.

4.2.1. *Limited tool use on social network sites*

"If I do have some questions, I ask people I know personally, because I know what they know and what they have done." (Melvin, 25)

Professional bodybuilders rarely use social network sites as a tool to improve their performance in competitions, because they draw from their own experience or the expertise of their colleagues. Due to their full immersion in the bodybuilding world, professionals usually have larger networks of fellow bodybuilders and personal trainers in their offline lives than amateurs. One of our participants—Francis—grew up as son of a gym owner and nephew of a national bodybuilding champion. When he moved to California, he extended his bodybuilding networks and became the training partner of a former elite bodybuilder. Francis's training partner provided him with advice and critical feedback to help him monitor his progress:

"He tells you straight in the face how you are looking. Some of the people in the sport with less experience think you look amazing, whereas Shawn tells you, for example, you need more size on one of these muscle groups." (Francis)

Some professional bodybuilders tried to use BodySpace as a tool, but encountered two problems. The quality of advice that they receive on BodySpace does not match the quality they get from their colleagues offline. Furthermore, sharing their expertise for free on BodySpace constitutes a dilemma. As professionals they usually charge their clients for their knowledge and support. Thus they hesitate to provide too much support for free online, which delimits collaboration between amateurs and professionals:

"The people that have asked me questions—I don't give a whole lot of advice for free, because it is my profession." (Wendy)

4.2.2. *Social network site as a community to network with other professionals and to keep in touch with clients*

"You never know who you know. There are some people that I add just in case. To have a contact, that's what those things are for." (Melvin)

Professional bodybuilders are usually well connected with other bodybuilders due their full time immersion in the sport. Thus social network sites fulfill a different role in connecting with the community. Professionals are less interested in looking for friendships online; they rather use social network sites to manage relationships with other professionals or their clients.

First, professional bodybuilders participate on social network sites to keep in touch with other professionals. On BodySpace they exchange comments to stay in touch and to coordinate informal meetings at bodybuilding events.

"BodySpace is all about people into fitness—just to stay in touch with each other, to meet at the Arnold Schwarzenegger Expo or the Olympia Expo, it's all through BodySpace." (Francis)

Second, professionals use social network sites to extend their professional networks to open up new business opportunities. Many bodybuilders try to use their networks to get in contact with photographers or editors of magazines, who may hire them for photo shoots. Others share or pass on personal training clients:

"Kaito, from Japan, is back here now, and he has asked me if I could give him some clients. So if I have anybody else that I would take on, I would give them to him to train and probably take a percentage of it." (Tim)

Finally, some personal trainers also appropriate BodySpace to keep in touch with their clients. Wendy, a personal trainer in California, has received valuable support from other BodySpace users when she started her bodybuilding career. She now encourages her personal training clients to use BodySpace to get immersed in the bodybuilding community and to develop the same passion that she has. Being connected to her clients on BodySpace, Wendy also gets a sense of their wellbeing and provides them with support in between training sessions:

"Right now I'm using it more to check on my clients that use it. I have a look at their blogs and see how they are feeling. I have most of my competitors do a journal and that includes their diets, their training, and also how they feel, because I want to know how they feel when they are training, if they have energy, if they have the motivation for their workout." (Wendy)

The collaboration of personal trainers and clients on BodySpace provides opportunities for ongoing support as well as risks. Clients may find training and diet information on BodySpace that contradicts their trainer's advice. Applying contradicting information can diminish the client's progress or even damage their health. Thus personal trainers need to explain how online advice relates to the training of a client. Otherwise, the participation on social network sites may impede the collaboration between personal trainer and client in the gym:

"Sometimes I can get undermined and my clients say 'I read this on this magazine, and this is contradictory to what you said'. And then I have to explain why I'm doing it the way I'm doing it. (…) It can happen on BodySpace. I've had clients that have gotten advice from their friends. I've had a client and his friend told him not to do cardio any more, because 'bodybuilders don't do any cardio'." (Wendy)

4.2.3. *Social network site as a theater to promote the personal business*

"A good friend of mine was actually shocked. He beat me [in a show] and I got the supplement company contract. It's weird, but I do so much more. I don't sit around and wait and go 'Hey, I look great! Shouldn't people be contacting me? I just won a show, shouldn't they call me?' No, you call them. You send them photos. You have to get as proactive as you can." (Chris)

Professional bodybuilders use various means, including BodySpace, to proactively promote their achievements and to open up new business opportunities. Like amateur bodybuilders they present their achievements in bodybuilding shows on BodySpace and they derive important motivation through the comments they receive, which help them to endure the challenges in the preparation for competitions:

"You got to be able to train in the gym; you've got to be able to stick to a very specific diet. It's a 24 hours sport. So you do have to be highly motivated to do the sport. Most of the motivation is intrinsic. But BodySpace and others give you that extra motivation." (Francis)

Moreover, professional bodybuilders use BodySpace to promote their achievements to attract customers for their business. Many professional bodybuilders use BodySpace to find customers for their personal training business. Displaying photos on BodySpace that present the results of years of training attracts numerous requests for support from other BodySpace users. As we discussed earlier, professionals rarely provide free advice on BodySpace, because they need to make a living from it. However, some use free advice to attract potential clients for their personal training business:

"People come to me and say 'you have great abs' or 'great arms', or 'how do I get into the business of modeling?' And what I do is that I direct them to my personal website. Or I set up some financial plan for me to either guide them, or do the nutrition for them—something. And I'll be able to charge them for that, or establish some sort of relationship. I'll give somebody a tip there, a teaser, just a little bit of information, just enough to say to come and ask 'can I have a little more?' And then you got to say 'my time is valuable; I can't just do it for free. Let's talk serious, let's talk business!'" (Chris)

Additionally, professional bodybuilders seek to promote themselves through BodySpace to food supplement companies and magazines for sponsorships and photo shoots. Since such income opportunities are rare, bodybuilders are aware of the importance of personal contacts: *"They say, it's who you know. You have to have the right connections"* (Andy). These contacts are not established merely by winning a competition but through active self-

promotion and networking, as discussed by Chris, a personal trainer and photo model:

> "I get a lot of modeling from BodySpace. I'm in Iron Man magazine this month from BodySpace. I got endorsed by a supplement company, which has phenomenal supplements, from BodySpace. So I've got quite a few photo shoots, magazine stuff, supplement stuff, just from the beginning stage of the BodySpace. But it's all about the networking and the relationships. (…) You have to be on there. You have to be networking, sending little tips in messages that people—otherwise you are not gonna get any feedback at all."

Self-promotion on BodySpace appears to create opportunities for photo shoots and sponsorships for people like Chris and others on BodySpace, which sparks imitation by other professional bodybuilders. Chris presented his Iron Man magazine article on his BodySpace profile, and the article was also featured through the official BodySpace blog. Other BodySpace users see what is possible through the social network site and follow his example:

> "On BodySpace and MySpace I put photos out there as much as there can be. And that's why I add people and log on every day so that people see that I'm active." (Melvin)

BodySpace appears as a place to get discovered by sponsors and magazines, yet the impression may be misleading. BodySpace itself recruits users for photo shoots to advertise BodySpace in bodybuilding magazines, but we found no evidence of direct involvement of individuals from magazines or supplement companies on BodySpace. Beyond that, even the recruitment by BodySpace may be unrelated to participation on BodySpace itself. During further discussion with Chris we discovered that his recruitment by BodySpace was triggered by his longstanding relationship with the leading photographer of BodySpace:

> "Originally, he found me as a model. He shot me for a photo shoot. Over a year or two he shot me a few times. And we just kind of started a relationship there. Just from modeling and photography. And over the past couple of years it grew into some friendship as well."

4.3. Mr. Olympia and other celebrities

> "Meeting Arnold was one of the greatest highlights of my whole career." (George)

Few bodybuilders reach celebrity status, where they compete professionally and are widely known for their achievements. Almost 30 years after his last success in the Mr. Olympia competition—the most important title in bodybuilding—Arnold

Schwarzenegger is still the biggest celebrity in the bodybuilding world and a role model for many bodybuilders. Due to his successive careers as an actor and politician he is the only bodybuilder that is widely known to the public. Some of the contemporary celebrities in the bodybuilding scene like Jay Cutler, Dexter Jackson or Ronnie Coleman have won more Mr. Olympia titles than Schwarzenegger, yet their fame is restricted to the bodybuilding world only (Hotten 2004). Bodybuilding rarely appears on TV or in other mass media channels and as a result its celebrities earn very little compared to celebrities in mainstream sports like football, basketball, or tennis. Very few bodybuilders can make a living purely from prize money in competitions, sponsorships or photo shoots. Many use their reputation to supplement their income through bodybuilding-related jobs like personal training.

Our online observations show that despite their financial challenges celebrities are very rarely active participants on BodySpace. Though BodySpace is the biggest social network site for bodybuilders, we found that only seven of the 46 female competitors and only two of the 23 male competitors at the 2009 Mr. Olympia competition had a profile on BodySpace.[3] The interview participants also shared this observation, stating celebrities are "*not on BodySpace. You find some good amateurs, but there are no pro-bodybuilders on it.*" (Paul, 21)

4.3.1. *No tool use on social network sites*

"My whole life is basically eating, sleeping and training." (Jay Cutler, Mr. Olympia 2009, during an interview on stage at a bodybuilding show)

Our findings show that celebrities do not use BodySpace as a tool. None of the celebrities we interviewed and none of the aforementioned nine celebrity profiles used any tool feature like the progress pictures or statistics. Clearly, celebrity bodybuilders would have the greatest need for tools to improve their performance. Contemporary elite athletes have made enormous improvements since the days of Schwarzenegger. These improvements have become possible due to two recent developments: Firstly, contemporary celebrities have a professional team of training partners, professional coaches, managers, and nutritionists that help them accomplish their goals. Having access to expert knowledge on training and nutrition, and being monitored on their progress by their coaches, they do not require social network sites as tools:

"In each sport you have a team. Jay Cutler said it best in his interview, you know, he has got his wife, his manager, his trainer, you know the people who help him out, who are very close to him. And it's hard to do it on your own because it's the hardest sport in the world." (George)

Secondly, bodybuilders have access to the latest developments in food supplements and performance-enhancing drugs. Most of the participants in our study compete in so-called 'natural' competitions, which prohibit drug use. Yet

the majority shared the view that competing on the level of celebrities would be impossible without performance-enhancing drugs:

"Everyone knew, as unwritten knowledge, everyone who wanted to compete at the highest level, you either took the steroids or you couldn't compete, you weren't going to win. And everyone still understands that." (James)

As in other sports, some athletes revert to performance enhancing drugs like anabolic steroids or human growth hormones to gain further strength. However, bodybuilding is possibly the only sport where the leading organizations do not test for performance-enhancing drugs and thus implicitly accept their use for competitions. Bodybuilders do not use BodySpace to share knowledge on that subject, because steroids are illegal in most countries. Sharing information about steroids on a social network site with a personal profile inherits the risk of legal ramifications.

4.3.2. *Rare community involvement on BodySpace*

"All the pros trained at 10 am in the morning. And afterwards all the pros go to the Firehouse to eat. (…) I would be here every day at 10 to train. (…) And Mike would be here, Shawn Ray would be here; just all the top pros would be here all the time. (…) In the afternoon, either 4 or 6 at night they would be back training again. Sometimes I wouldn't be here in the afternoon, but Mike and I became really good friends. And I ended up becoming the godfather for his son. He was one of my best friends, a very, very nice guy." (Tim)

Most celebrities train at Gold's Gym in Venice, CA, the self-proclaimed "Mecca of Bodybuilding". Being immersed in a social world that is made up predominantly of bodybuilders, celebrities do not use BodySpace as a community to establish connections with other bodybuilders. Only five of the nine celebrity profiles on BodySpace had mutual friends on BodySpace, and only three of them had left any comment on someone else's BodySpace profile. The remaining six celebrity profiles did not list any recent profile updates, five of them had not even logged into BodySpace in the last 12 months. Our observations in California suggest that their offline friends can relate to the challenges they go through and provide the support they need while preparing for competitions.

However, celebrities are role models within the community and thus expected to engage with amateur competitors and other fans outside bodybuilding competitions. Social network sites like BodySpace provide an outlet for such interactions, but most celebrities rather use their own personal websites. Unlike BodySpace, personal websites are under the control of the celebrity and their sponsors. On there they post news and engage in discussions with their fans:

"I think BodySpace is more for beginners—you don't really see professionals on there. (…) Usually the pros have their own websites.

And on their own websites they have blogs, and you can subscribe to their blogs and ask them questions." (Keith)

Jay Cutler like many other celebrities has a personal homepage, but he also has MySpace and Facebook fan pages with more than 10,000 fans on each social network site. The wall on Facebook fan pages supports communication between a celebrity and a large numbers on fans as well as communication amongst fans. Jay Cutler uses it to post news about his training and competitions.

"Mostly the Facebook ones are for the really high up bodybuilders, they are just like fan sites. So you can become a fan. It's not really personal, it's like I'm a fan of Jay Cutler." (Paul)

In addition to fan pages, celebrities like Jay Cutler also have a personal profile on Facebook, which is private for their interactions with friends only. If Facebook would not support privacy, celebrities would be overwhelmed with personal requests as suggested by Juliet: *"Because they are people too. Besides having a huge fan base, they are professional bodybuilders that have a network of business associates and friends. They don't want 10.000 fans to see their wall."*

Facebook and MySpace are clearly different from BodySpace in terms of their user base, functionalities, and the activities they facilitate. However, these observations on Facebook and MySpace highlight some limitations of Body-Space, such as privacy controls, and the one-to-many communication channels offered by Facebook fan pages. These limitations may contribute to the lack of community involvement by celebrities on BodySpace.

4.3.3. *Social network site as a theatre to promote achievements and products*

"They do it more for marketing themselves. (…) I'm sure they are hearing from everyone around them that they are beautiful, that they are gorgeous, that they are doing a great job. They don't need BodySpace to tell them that." (Wendy)

All celebrity profiles we analyzed had received comments. The comments generally comprised expressions of admiration like *"Always inspiring to see you, in print, online, but my highlight was actually seeing you at the 'O' last year. Big fan!!!"* and appraisals of their achievements like *"You look amazing!"* However, only three of the nine celebrities left comments on their fans' BodySpace profiles to thank them for their appreciation.

Despite the low levels of participation of top celebrities on BodySpace, we found various profiles of aspiring celebrities. These are bodybuilders who have qualified for competitions on a professional level, won some prize money, and get support through sponsorships. However, they still rely on other jobs to make a living and to carry the costs of bodybuilding:

"Even if you are a pro, you still have to be spend money, promote yourself, get to know the right people. You don't get paid unless you start winning,

and become one of the top 3 people at the shows, at the big shows. At the Olympia, which is the top tournament, they place the top 10. And the 10th guy might get 5,000 dollars and that's nothing." (Chris)

Aspiring celebrities use BodySpace as a theater to promote their achievements and their businesses. They use their photos and their accreditation as a professional competitor to establish reputation on BodySpace, and like other bodybuilders, they seek for personal training clients and photo shoots:

"There are some professional figure competitors and bodybuilders that use BodySpace. (…) And they have a lot of their modeling photos. A lot of them are personal trainers and people would go to them for personal advice and they can charge them. I think that's why they mostly use it." (Wendy)

Beyond that, some aspiring celebrities participate on BodySpace to establish a fan base and to promote products like food supplements or fan merchandise. Through our online observations we found that some aspiring celebrities display products in their status message or their profile photo. Others utilize their large numbers of fans and friends on BodySpace and post comments on their profiles:

"CHECK OUT MY NEWLY RELEASED DVD! Some fun highlights include: Halloween Guest Posing with my kids! Ripping cans apart! 500lbsplus Bench press at contest weight! American Gladiator Tryout Footage! and cooking—We Rated it R Ridiculously Funny! as it not your typical Hardcore Bodybuilding DVD Thanks for the Support! Take Care-A." (Comment on BodySpace)

5. Discussion

The question we seek to answer is how individuals at different stages of their career—amateurs, professionals and celebrities—appropriate social network sites to collaborate with others in their domain.

Our findings show that the collaboration on social network sites varies depending on the career stage. First, amateurs use passion-centric social network sites as a tool to improve their performance in competitions, as a community to form new relationships and to exchange support, and as a theater to display their achievements. Second, professionals rarely use social network sites as a tool. They rather use them as a community to extend their ties to other professionals and as a theater to promote their business to potential clients. Finally, celebrities have very limited presence on BodySpace because they have professional support networks offline. Aspiring celebrities however—professional competitors who seek to establish reputation—use social network sites as a theater to promote their achievements to build up a fan base.

5.1. Theoretical implications

The main contribution of this study is that it extends previous work on the collaboration of amateurs on passion-centric social network sites (Miller and Edwards 2007; Ploderer et al. 2008) by including also professionals and celebrities in the domain. The findings are novel, because they highlight the differences in the online collaboration between and within amateurs, professionals and celebrities, indicating a trend from online to offline collaboration as people progress in their careers.

One explanation for this shift from online to offline collaboration may be that amateurs tend to be more socially isolated than professionals or celebrities. Amateurs sacrifice their leisure time and generally feel marginalized by the public, which cannot relate to their serious approach to leisure. Amateur bodybuilders in particular risk further marginalization due to stereotypes like steroid use and the stigma carried by muscular bodies (Monaghan 2001; Probert 2007). Bodybuilding may highlight the problem of social isolation, but Stebbins (1979) argues that amateurs feel marginalized across domains, even in more popular activities such as theater plays or baseball. Thus amateurs rely the most on collaboration through social network sites to support each other to achieve their goals and to alleviate their sense of isolation.

Professionals and celebrities on the other hand feel less isolated, because they work full-time in the domain and generally have larger and more tightly knit offline networks of friends, colleagues and clients. These networks can relate to the challenges of their passion and provide support. Thus they take over the role of social network sites as a tool, and in the case of aspiring celebrities, the community role. Yet these groups use social network sites as theaters, because they offer access to a larger group of people that provides recognition for their achievements.

Though differences in social isolation were important, they only partially explain the shift from online to offline interactions. Some amateurs (like Keith) work out in bodybuilding gyms coached by professional bodybuilders, yet they collaborate with others on social network sites using them as a tool, community and theater. Conversely, some professionals work in isolation from other bodybuilders (like Andy), yet they do not use social network sites as tools.

The concept of 'communities of practice' by Lave and Wenger (1991) provides a different explanation for this shift from online to offline collaboration, because it highlights that the needs for personal development—the development of skills and knowledge, but also the development of an identity—vary between individuals at different stages of their career. Participation in passion-centric social network sites supports personal development: The tool theme unpacked how people further their skills and knowledge online, and the community and theatre themes illustrated how people establish relationships online and exchange recognition, which furthers their identity. Like on other social network sites,

people carefully tailor their online identity through their profile descriptions and their interactions with others users to "write themselves into being" (Boyd 2008, p. 129). As described in Section 4.1.3, amateur bodybuilders (but also professionals and celebrities) use the control they have over their online identity to highlight socially desirable aspects about themselves. Although they do not create a 'second self' (Turkle 1995) that bears no resemblance to their offline identity, they leave out personal information that would cast negative light on them, resulting in an "idealized projection of the real-life 'actual self'" (Krasnova et al. 2009, p. 42). The findings show that the (idealized) online identity is usually closely related to their offline 'bodybuilder' identity, but it rarely contains information about them outside bodybuilding. Thus, the alignment of online and offline identity varies between amateurs, who may have many other identities outside bodybuilding, and professionals and celebrities, for whom the body-builder identity is more central offline as well.

The findings show that people holding a peripheral status in the community of practice—amateurs—gain most from their online participation. Amateur body-builders become legitimate participants in their domain when they first compete, which proves their dedication and qualifies them as a bodybuilder. To develop their skills and knowledge further, they use passion-centric social network sites as tools to learn, often seeking the advice from more experienced bodybuilders online. Lave and Wenger (1991, p. 115) state that "the development of identity is central to the careers of newcomers in communities of practice". Our findings describe how amateurs use passion-centric social network sites as a community to establish relationships with other bodybuilders, and as a theatre to develop their bodybuilding identity online. Amateurs may benefit more from online participation than the other groups, because they have fewer opportunities than professionals or celebrities to develop their skills and bodybuilder identity offline.

The use of passion-centric social network sites changes as people shift towards a more central position within the domain and occupy professional roles. The data shows that professionals and aspiring celebrities use social network sites less as tools to develop skills; rather they use them as a theater to develop their identity further in order to gravitate towards a more central position. Due to their full immersion in the bodybuilding world, online participation is less central to their bodybuilding identity. Accordingly, the findings show that people occupying positions in close proximity to the centers of their domain—celebrities—do not participate in passion-centric social network sites but rather use other avenues to interact with fans.

The discussion of identity indicated that passion-centric social network sites play an important role as a place, which appears to be independent from places offline. Particularly amateurs benefit from passion-centric social network sites as a place to establish relationships, socialize with peers and develop their bodybuilder identity, in a different manner than in places like their gym. As a theoretical frame for place and social interactions online, studies of virtual worlds

(Ducheneaut et al. 2007; Steinkuehler and Williams 2006) and social network sites (Humphreys 2007) have used Oldenburg's notion of a 'third place' (1989), where people can gather to socialize informally beyond the workplace and home. Our findings show that passion-centric social network sites fulfill some of Oldenburg's criteria for a third place—they provide a neutral ground with little obligation, they are easy to access, and they have a group of regulars. However, the findings also highlight issues where passion-centric social network sites do not fit with Oldenburg's criteria for a third place: Oldenburg (1989) noted that an individual's rank and status in the home, workplace, or society are of no importance in third places. Our findings show that passion-centric social network sites indeed allow amateurs to get in touch with more experienced bodybuilders more easily than in the gym, still, the differences between amateurs, professionals and celebrities in their participation in passion-centric social network sites, and the reluctance of some professionals to provide free advice online, shows that rank and status matter on passion-centric social network sites. Furthermore, while conversation is important on passion-centric social network sites, the conversations on passion-centric social network sites are not always playful, like in Oldenburg's concept of third place (1989), but often rather utilitarian: The tool theme highlighted that amateurs participate in passion-centric social network sites to improve their training and dieting regimes, and the community and theatre themes in the context of professionals and celebrities showed that many of the interactions online were motivated by commercial interests, like to sell their services and products, or to keep in touch with clients in between offline meetings. These examples illustrate that passion-centric social network sites are a place where the boundaries between informal conversations and work blur, as suggested by the serious leisure perspective (Stebbins 2007). Moreover, these examples challenge the view that passion-centric social network sites constitute a separate place, because they show that the online activities of all three groups are tightly integrated with their practices offline, similar to friend-based social network sites (Boyd and Ellison 2007) or professional social network sites (DiMicco et al. 2008).

In addition to the differences between amateurs, professionals and celebrities on passion-centric social network sites, each of these groups also contributes to existing work independently. The findings on amateurs in this paper extend previous work on collaborative technologies for amateurs like crafts people, musicians, photographers, athletes and amateur programmers, by highlighting the limitations of online collaboration: Previous work has emphasized the benefits of discussion forums or social network sites, such as information exchange (Torrey et al. 2009), learning (Cook et al. 2009), sharing results (Miller and Edwards 2007), and the coordination of rules (Grinter 2005) and group activities (Lampe and Ellison 2010). Bogdan and Mayer (2009) argue that these benefits help to sustain the work done by amateurs. The findings of this study confirm these benefits, but they also highlight limitations of online collaboration that impede

these benefits. From a tool perspective, social network sites are used to exchange feedback on each other's progress, but the feedback is generally positive, even when critical feedback is explicitly sought to learn and improve. This limitation may stem from the weak tie relationships amongst users of passion-centric social network sites, where people tend to feel more distant and less mutually responsible for one another than people with strong ties (Donath 2007; Granovetter 1973). From a community perspective, social network sites are useful to connect with other amateurs, yet they are limited in providing connections to professionals or even celebrities who hold the most valuable knowledge. Finally, from a theater perspective, social network sites help to share achievements and to gain recognition, which comes at the cost of ignoring the accounts of those who struggle and fail to succeed. The focus on success stories may be part of the competitive nature of this group, but it can also be viewed as a reflection of the culture of this specific social network site. BodySpace is set up to support the achievement of goals, in contrast to social network sites that are designed to facilitate support amongst people in difficult situations (Ashkanasy et al. 2009).

The findings on the professionals' use of passion-centric social network sites support and extend previous work on social network sites in organizational contexts. Similar to studies of IBM's social network site Beehive (Chen et al. 2009; DiMicco et al. 2008), our data shows that professionals use passion-centric social network sites to keep in touch with colleagues and to advance in their careers by networking and building up a reputation. In contrast to previous work, our data shows up limitations of social network sites for career advancement. The professionals and aspiring celebrities in this study were seeking commercial opportunities through the passion-centric social network site. However, unlike in large organizations where top management is also present online (DiMicco et al. 2008), those who occupy positions to offer jobs or sponsorships in the bodybuilding world—managers of supplement companies and editors of magazines—are usually not bodybuilders themselves and thus do not use passion-centric social network sites.

Finally, this paper contributes to our understanding of celebrities on social network sites. The widespread absence of celebrities in this study appears to contradict evidence from other social network sites like MySpace and Facebook, which are home to many celebrities in the music scene (Beer 2008; Suhr 2009). Facebook and MySpace have much larger numbers of active users, including also those that are not active participants in the domain and may not have profiles on passion-centric social network sites. Beyond that, Facebook and MySpace provide celebrities with profiles that serve as fan pages, allowing celebrities and a large number of fans to communicate. The wall on Facebook, for example, is designed for celebrities to broadcast news to a large number of fans, similar to traditional mass media (Emmett 2008). Fans can comment on these news, which facilitates communication amongst them (Beer 2008), like on fan online communities (Baym 2007). BodySpace lacks such special profiles for fan pages,

and regular BodySpace profiles are better suited for communication between two individuals using comments or private messaging. The data showed that some celebrities made the effort to visit large numbers of profiles where they left comments to inform their fans about new products. However, the time involved in this process may explain why most celebrities participate very rarely in passion-centric social network sites.

5.2. Practical implications

The finding that the use of social network sites varies considerably at different career stages provides an important contribution to practice, because social network sites need to be tailored to attract and support a variety of people at different stages of their career in order to flourish. Although we have studied only one setting, we believe that the insights gained in this study have practical implications for social network sites designed for similar settings, like for other sports, arts or entertainment. The following discussion highlights design considerations, which we believe will facilitate online collaboration between and within groups of amateurs and professionals.

5.2.1. *Focus on the promotion of achievements and updates rather than on tools*
Tools like progress photos or training diaries help amateurs to learn and to improve their performance, but at least equally as important, and contrary to prior research (Ploderer et al. 2008; Torrey et al. 2009), they are means to communicate updates and achievements to other users of the social network site. Our findings show that amateurs use tool features as intended for their trainings, but equally to present their achievements to others online. The professionals rarely used the social network site as a tool, and the aspiring celebrities and celebrities predominantly appropriated the tool features for commercial purposes: Instead of using the tools to support their training regimes, they used these features to promote their work and to seek clients for their business activities.

   Based on our findings, passion-centric social network sites that focus on tools *and* on signaling user updates and achievements to a large audience are likely to attract more user participation than those that focus on functional tools only. BodySpace, for example, uses its start page to promote recent updates of photos and statistics together with the most popular profiles, which provides attention and persuades people to update their profiles more frequently. Moreover, BodySpace features popular user profiles in bodybuilding magazines to advertise the website. Exposure in magazines provides users with wider recognition in the bodybuilding world, which benefits their professional career.

5.2.2. *Constrain privacy to facilitate interactions amongst strangers*
Contrary to previous research on non-passion-centric use of social network sites (Miller and Edwards 2007) we argue against private profiles or other privacy

settings on passion-centric social network sites, in order to increase transparency in online interactions amongst strangers. BodySpace does not provide privacy options that would constrain the visibility of people's profiles, because individuals form impressions of other users based on photos, personal descriptions, and links to friends on the profile before they establish connections with strangers online. BodySpace even increases transparency by making information like comments left on other profiles, friendship requests, and login dates visible on the profile.

Our studies show that transparency has contributed to a positive and supportive atmosphere online, where negative comments or debates of controversial issues like steroids are rare. Thus passion-centric social network sites that support transparency are likely to facilitate more connections and support amongst amateurs and professionals than those that constrain transparency by keeping profile information private.

5.2.3. *Embrace commercial use rather than prohibiting it*

The serious leisure perspective argues that simplistic distinctions between leisure and professional work are insufficiently varied (Stebbins 2007), and the findings of this study reflect this observation in the context of social network sites. Professionals appropriate functions like profile photos or status messages to promote commercial work to other users on the social network site, even though this constitutes a violation of BodySpace's terms of use.

Based on our studies, passion-centric social network sites will gain their full power by using commercial features, such as marketplaces for goods and services, to draw more professionals to sites and provide the basis for interaction between amateurs and professionals. Sites that use this approach are likely to be more successful than those that try and prohibit commercial activity.

6. Conclusions

Previous studies of social network sites have either concentrated on online interactions amongst friends and amateurs in their leisure (Joinson 2008; Lampe et al. 2006, 2008; Miller and Edwards 2007), or on professionals in large organizations (DiMicco et al. 2008; Steinfield et al. 2009). Despite the growing body of knowledge in these two areas, little is known about interactions between amateurs and professionals on social network sites.

In this paper we present findings of a 1.5-year field study on the collaboration between and within amateurs, professionals, and celebrities on social network sites in the context of bodybuilding. Our study highlights the needs for information exchange and knowledge sharing in order to learn, participate and advance the activities of a community. It opens up discussion about risks like social isolation and pathological behavior that can arise during serious engagement in leisure and work, and it highlights the value of personal

relationships for dealing with these risks and advancing careers. It illustrates how social network sites are used to construct rewards beyond financial return, like self-image, social status and recognition. Despite the similarities between amateurs, professionals and celebrities, our findings also highlight differences between these groups: Social network sites are most valuable to amateurs, who exchange functional and social support online for their training and competitions. Professionals and celebrities appropriate social network sites for their commercial work, but other social and functional aspects shift from social network sites to offline settings as individuals advance in their career.

This shift from social network sites to offline settings during an individual's career constitutes a novel finding, extending previous work that studied social network sites of amateurs and professionals in isolation. This finding shows that simplistic distinctions between work and leisure are insufficiently varied to understand the broad phenomenon of social network sites and their integration into the daily practices of millions of users.

Finally, this study challenges simplistic distinctions between different types of social network sites based on the types of relationships they facilitate. Most people interacted with strangers—people with no offline relationships-, which supports the literature on 'passion-centric social network sites' (Boyd and Ellison 2007). Yet our studies also surfaced collaborations with clients and colleagues as on 'professional social network sites' like Beehive (DiMicco et al. 2008), as well as with fellow competitors and friends as on 'friend-based social network sites' like Facebook or MySpace (Boyd and Ellison 2007). In future work we aim to further explore the influence of offline ties on the collaboration between amateurs and professionals. We intend to apply our findings to social network sites where individuals are primarily connected on the basis of joint offline activities, like in sports clubs, welfare organizations, rock bands, or motorcycle clubs.

Acknowledgements

Notes

1. We use the term 'bodybuilding show' as an umbrella term for physique, figure and fitness competitions. Men usually compete in physique competitions where they are judged by muscle size, symmetry and proportion. Some women also compete in physique competitions, but most women compete in figure or fitness competitions that emphasize a "feminine shape and proportion, while retaining a trained look" (NABBA 2009, online).
2. http://bodyspace.bodybuilding.com/
3. Bodybuilding.com lists famous bodybuilders who have a profile on BodySpace on http://www.bodybuilding.com/fun/bodyspaceprofiles.htm.

References

Ashkanasy, S., Vetere, F., Davis, H., & Shanks, G. (2009). Finding the other 5%: Understanding the role of social networking technologies in building personal networks for young adults with cancer. In I. Wagner, H. Tellioglu, E. Balka, C. Simone, & L. Ciolfi (Eds.), *Proceedings of the European Conference on Computer Supported Cooperative Work (ECSCW 2009), Vienna, Austria, September 7–11, 2009* (pp. 105–122). London: Springer.

Bardzell, J. (2007). Creativity in amateur multimedia: Popular culture, critical theory, and HCI. *Human Technology, 3*(1), 12–33.

Baym, N. K. (2007). The new shape of online community: The example of Swedish independent music fandom. *First Monday, 12*(8). Retrieved from: http://131.193.153.231/www/issues/issue12_8/baym/.

Baym, N. K., & Burnett, R. (2009). Amateur experts: International fan labour in Swedish independent music. *International Journal of Cultural Studies, 12*(5), 433–449.

Beer, D. (2008). Making friends with Jarvis Cocker: Music culture in the context of web 2.0. *Cultural Sociology, 2*(2), 222–241.

Binder, J., Howes, A., & Sutcliffe, A. (2009). The problem of conflicting social spheres: Effects of network structure on experienced tension in social network sites. In D. Olsen & R. Arthur (Eds.), *Proceedings of the Conference on Human Factors in Computing (CHI 2009), Boston, MA, April 4–9, 2009* (pp. 965–974). New York: ACM.

Bogdan, C., & Bowers, J. (2007). Tuning in: Challenging design for communities through a field study of radio amateurs. In C. Steinfield, B. Pentland, M. Ackerman, & N. Contractor (Eds.), *Proceedings of the Communities and Technologies Conference (C&T 2007), Michigan State University, East Lansing, MI, June 28–30, 2007* (pp. 439–461). London: Springer.

Bogdan, C., & Mayer, R. (2009). Makumba: The role of the technology for the sustainability of amateur programming practice and community. In J. Carroll (Ed.), *Proceedings of the Communities and Technologies Conference (C&T 2009), University Park, PA, June 25–27, 2009* (pp. 205–214). New York: ACM.

Boyd, D. (2008). Why youth (heart) social network sites: The role of networked publics in teenage social life. In D. Buckingham (Ed.), *Youth, identity, and digital media* (pp. 119–142). Cambridge: MIT.

Boyd, D., & Ellison, N. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210–230.

Brown, G., Howe, T., Ihbe, M., Prakash, A., & Borders, K. (2008). Social networks and context-aware spam. In B. Begole & D. McDonald (Eds.), *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2008), San Diego, CA, November 8–12, 2008* (pp. 403–412). New York: ACM.

Bruckman, A. (2002). Studying the amateur artist: A perspective on disguising data collected inhuman subjects research on the Internet. *Ethics and Information Technology, 4*(3), 217–231.

Burke, M., Marlow, C., & Lento, T. (2009). Feed me: Motivating newcomer contribution in social network sites. In D. Olsen & R. Arthur (Eds.), *Proceedings of the Conference on Human Factors in Computing (CHI 2009), Boston, MA, April 4–9, 2009* (pp. 945–954). New York: ACM.

Butler, B., Joyce, E., & Pike, J. (2008). Don't look now, but we've created a bureaucracy: The nature and roles of policies and rules in Wikipedia. In M. Czerwinski & A. Lund (Eds.), *Proceedings of the Conference on Human Factors in Computing (CHI 2008), Florence, Italy, April 5–10, 2008* (pp. 1101–1110). New York: ACM.

Chen, J., Geyer, W., Dugan, C., Muller, M., & Guy, I. (2009). Make new friends, but keep the old: Recommending people on social networking sites. In D. Olsen & R. Arthur (Eds.), *Proceedings of the Conference on Human Factors in Computing (CHI 2009), Boston, MA, April 4–9, 2009* (pp. 201–210). New York: ACM.

Cook, E., Teasley, S. D., & Ackerman, M. S. (2009). Contribution, commercialization & audience: Understanding participation in an online creative community. In S. Teasley & E. Havn (Eds.),

Proceedings of the Conference on Supporting Group Work (GROUP 2009), Sanibel Island, FL, May 10–13, 2009 (pp. 41–50). New York: ACM.

Crossley, N. (2006). In the gym: Motives, meaning and moral careers. *Body Society, 12*(3), 23–50.

Davis, S. B., & Moar, M. (2005). The amateur creator. In E. Edmonds (Ed.), *Proceedings of the Conference on Creativity & Cognition (C&C 2005), London, UK, April 12–15, 2005* (pp. 158–165). New York: ACM.

DiMicco, J., Millen, D. R., Geyer, W., Dugan, C., Brownholtz, B., & Muller, M. (2008). Motivations for social networking at work. In B. Begole & D. McDonald (Eds.), *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2008), San Diego, CA, November 8–12, 2008* (pp. 711–720). New York: ACM.

Donath, J. (2007). Signals in social supernets. *Journal of Computer-Mediated Communication, 13* (1), 231–251.

Ducheneaut, N., Moore, R., & Nickell, E. (2007). Virtual "third places": A case study of sociability in massively multiplayer games. *Computer Supported Cooperative Work (CSCW), 16*(1), 129–166.

Ellison, N. B., Lampe, C., & Steinfield, C. (2009). Social network sites and society: Current trends and future possibilities. *Interactions, 16*(1), 6–9.

Emmett, A. (2008). Networking news. *American Journalism Review, 30*(6), 40–43.

Ess, C., & AoIR Ethics Working Committee (2002). *Ethical decision-making and Internet research: Recommendations from the AoIR ethics working committee*: Association of Internet Researchers (AoIR). Retrieved from: http://www.aoir.org/reports/ethics.pdf.

Gilbert, E., Karahalios, K., & Sandvig, C. (2008). The network in the garden: An empirical analysis of social media in rural life. In M. Czerwinski & A. Lund (Eds.), *Proceedings of the Conference on Human Factors in Computing (CHI 2008), Florence, Italy, April 5–10, 2008* (pp. 1603–1612). New York: ACM.

Goffman, E. (1959). *The presentation of self in everyday life*. Garden City: Doubleday.

Granovetter, M. S. (1973). The strength of weak ties. *The American Journal of Sociology, 78*(6), 1360–1380.

Grinter, R. E. (2005). Words about images: Coordinating community in amateur photography. *Computer Supported Cooperative Work (CSCW), 14*(2), 161–188.

Hookway, N. (2008). 'Entering the blogosphere': Some strategies for using blogs in social research. *Qualitative Research, 8*(1), 91–113.

Hotten, J. (2004). *Muscle: A writer's trip through a sport with no boundaries*. London: Yellow Jersey Press.

Howe, J. (2005). The hit factory. *Wired*, *11*, 11. Retrieved from: http://www.wired.com/wired/archive/13.11/myspace.html.

Humphreys, L. (2007). Mobile social networks and social practice: A case study of Dodgeball. *Journal of Computer-Mediated Communication, 13*(1), 341–360.

Joinson, A. N. (2008). Looking at, looking up or keeping up with people?: Motives and use of Facebook. In M. Czerwinski & A. Lund (Eds.), *Proceedings of the Conference on Human Factors in Computing (CHI 2008), Florence, Italy, April 5–10, 2008* (pp. 1027–1036). New York: ACM.

Kittur, A., & Kraut, R. E. (2008). Harnessing the wisdom of crowds in Wikipedia: Quality through coordination. In B. Begole & D. McDonald (Eds.), *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2008), San Diego, CA, November 8–12, 2008* (pp. 37–46). New York: ACM.

Kittur, A., Chi, E. H., & Suh, B. (2008). Crowdsourcing user studies with Mechanical Turk. In M. Czerwinski & A. Lund (Eds.), *Proceedings of the Conference on Human Factors in Computing (CHI 2008), Florence, Italy, April 5–10, 2008* (pp. 453–456). New York: ACM.

Klein, A. M. (1993). *Little big men: Bodybuilding subculture and gender construction*. Albany: State University of New York Press.

Krasnova, H., Günther, O., Spiekermann, S., & Koroleva, K. (2009). Privacy concerns and identity in online social networks. *Identity in the Information Society, 2*(1), 39–63.

Lampe, C. A., & Ellison, N. (2010). Student athletes on Facebook. In K. Inkpen & C. Gutwin (Eds.), *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2010), Savannah, GA, February 6–10, 2010* (pp. 193–196). New York: ACM.

Lampe, C. A., Ellison, N. B., & Steinfield, C. (2006). A face(book) in the crowd: Social searching vs. social browsing. In P. Hinds & D. Martin (Eds.), *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2006), Banff, Canada, November 4–8, 2006* (pp. 167–170). New York: ACM.

Lampe, C. A., Ellison, N. B., & Steinfield, C. (2008). Changes in use and perception of Facebook. In B. Begole & D. McDonald (Eds.), *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2008), San Diego, CA, November 8–12, 2008* (pp. 721–730). New York: ACM.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

Lewis, K., Kaufman, J., & Christakis, N. (2008). The taste for privacy: An analysis of college student privacy settings in an online social network. *Journal of Computer-Mediated Communication, 14*(1), 79–100.

Luther, K., & Bruckman, A. (2008). Leadership in online creative collaboration. In B. Begole & D. McDonald (Eds.), *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2008), San Diego, CA, November 8–12, 2008* (pp. 343–352). New York: ACM.

Martin, D., O'Neill, J., & Randall, D. (2009). 'Talking about (my) generation': Creativity, practice, technology & talk. In I. Wagner, H. Tellioglu, E. Balka, C. Simone, & L. Ciolfi (Eds.), *Proceedings of the European Conference on Computer Supported Cooperative Work (ECSCW 2009), Vienna, Austria, September 7–11, 2009* (pp. 171–190). London: Springer.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks: Sage.

Miller, A. D., & Edwards, W. K. (2007). Give and take: A study of consumer photo-sharing culture and practice. In M. B. Rosson & D. Gilmore (Eds.), *Proceedings of the Conference on Human Factors in Computing (CHI 2007), San Jose, CA, April 28 to May 3, 2007* (pp. 347–356). New York: ACM.

Monaghan, L. F. (2001). *Bodybuilding, drugs, and risk*. New York: Routledge.

NABBA (2009). NABBA Rules. Retrieved from: http://www.nabba.co.uk/aboutus/rules.html.

Neuman, W. L. (2006). *Social research methods: Qualitative and quantitative approaches* (6th ed.). Boston: Allyn and Bacon.

Nov, O. (2007). What motivates Wikipedians? *Communications of the ACM, 50*(11), 60–64.

Oldenburg, R. (1989). *The great good place: Cafes, coffee shops, community centers, beauty parlors, general stores, bars, hangouts and how they get you through the day*. New York: Paragon Books.

Ploderer, B., Howard, S., & Thomas, P. (2008). Being online, living offline: The influence of social ties over the appropriation of social network sites. In B. Begole & D. McDonald (Eds.), *Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2008), San Diego, CA, November 8–12, 2008* (pp. 333–342). New York: ACM.

Probert, A. (2007). The fine line: An insight into 'risky' practices of male and female competitive bodybuilders. *Annals of Leisure Research, 9*(3–4), 272–290.

Skeels, M. M., & Grudin, J. (2009). When social networks cross boundaries: A case study of workplace use of Facebook and LinkedIn. In S. Teasley & E. Havn (Eds.), *Proceedings of the Conference on Supporting Group Work (GROUP 2009), Sanibel Island, FL, May 10–13, 2009* (pp. 95–104). New York: ACM.

Smith, D., & Hale, B. (2005). Exercise-dependence in bodybuilders: Antecedents and reliability of measurement. *Journal of Sports Medicine and Physical Fitness, 45*(3), 401–409.

Stebbins, R. A. (1979). *Amateurs: On the margin between work and leisure*. Beverly Hills: Sage.

Stebbins, R. A. (1992). *Amateurs, professionals and serious leisure*. Montreal: McGill-Queen's University Press.

Stebbins, R. A. (2007). *Serious leisure: A perspective for our time*. New Brunswick: Transaction Publishers.

Steinfield, C., DiMicco, J. M., Ellison, N. B., & Lampe, C. (2009). Bowling online: Social networking and social capital within the organization. In J. Carroll (Ed.), *Proceedings of the Communities and Technologies Conference (C&T 2009), University Park, PA, June 25–27, 2009* (pp. 245–254). New York: ACM.

Steinkuehler, C. A., & Williams, D. (2006). Where everybody knows your (screen) name: Online games as "third places". *Journal of Computer-Mediated Communication, 11*(4), 885–909.

Suhr, H. C. (2009). Underpinning the paradoxes in the artistic fields of MySpace: The problematization of values and popularity in convergence culture. *New Media Society, 11*(1–2), 179–198.

Torrey, C., Churchill, E. F., & McDonald, D. W. (2009). Learning how: The search for craft knowledge on the internet. In D. Olsen & R. Arthur (Eds.), *Proceedings of the Conference on Human Factors in Computing (CHI 2009), Boston, MA, April 4–9, 2009* (pp. 1371–1380). New York: ACM.

Turkle, S. (1995). *Life on the screen: Identity in the age of the internet*. New York: Simon & Schuster.

Van House, N. A. (2007). Flickr and public image-sharing: Distant closeness and photo exhibition. In M. B. Rosson & D. Gilmore (Eds.), *Extended Abstracts of the Conference on Human Factors in Computing (CHI 2007), San Jose, CA, April 28 to May 3, 2007* (pp. 2717–2722). New York: ACM.

Vyas, D., Heylen, D., Nijholt, A., & Veer, G. (2009). Collaborative practices that support creativity in design. In I. Wagner, H. Tellioglu, E. Balka, C. Simone, & L. Ciolfi (Eds.), *Proceedings of the European Conference on Computer Supported Cooperative Work (ECSCW 2009), Vienna, Austria, September 7–11, 2009* (pp. 151–170). London: Springer.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge: Cambridge University Press.

Wolke, D., & Sapouna, M. (2008). Big men feeling small: Childhood bullying experience, muscle dysmorphia and other mental health problems in bodybuilders. *Psychology of Sport and Exercise, 9*(5), 595–604.