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Visions of the Human in Science Fiction & Cyberpunk

Edited by

Marcus Leaning & Birgit Pretzsch

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The Cyber Hub
'Visions of Humanity'

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Introduction

Marcus Leaning & Birgit Pretzsch

This collection of papers joins a growing body of work addressing what are arguably some of the most important questions faced in the 21st century; what does it mean to be human and what do we understand by humanity?

Such questions are of course not peculiar to our age; various answers have been manifest in different forms throughout the history of human thought. However what makes the questions of pertinence now, and of particular interest to the participants of the 'Visions of Humanity Conference' is their posing at a time of such cultural turbulence. By cultural turbulence we are talking both of the 'post-modern' nature of such questions; that we are no longer asking questions about humanity but questioning our categories of the human, and of a set of interlinked, contemporary phenomena.

Such phenomena may for convenience's sake be grouped into three areas; the current intensity of global modernity, the emergence of new forms of technology and the cultural representations of such technology.

Firstly, Global modernity; by referring to a 'global modernity' we draw attention to the deeply interwoven nature of contemporary life across the globe. By this we do not mean that there is some form of globally shared culture or commonality of experience. Rather we regard global modernity as the extent to which capitalist enterprise reaches into nearly all societies. Even those regions of the world regarded as being on the periphery of capitalist enterprise are subject to forces originating in far off societies and cultures. In recent years this phenomena has increased in intensity considerably. Macro-economic developments, the increasing the awareness of global risks, and dramatic changes in global political patterns and structures all contribute to an epoch in which the consequences, if not the benefits, of modernity are globally felt.

Secondly, the emergence of new forms of technology and particularly media technology; the dramatic developments in forms of communication and their widespread deployment is widely understood to have enabled, if not caused, significant changes in patterns of social life. While the question as to whether new media technologies empower us or consign us to new systems of subjugation, control and even alienation remains, and probably will remain, unanswered, their presence as a significant factor in cultural life cannot be ignored. Similarly the transformation of the way in which texts, particularly but not exclusively new media texts, function semiotically and ideationally have also proven a rich field of concern and interest.

Thirdly, the cultural representations of such changes; if Modernism is best understood as both a mediation and representation of the nature of

Modernity then the forms of cyberculture perhaps perform a similar role in relation to the experience of global Modernity and the emergent technoculture. Of course, as with Modernism, cyber culture not only represents the issues of our time but mediates, structures, reinforces and channels debate in our societies. Cyberculture provides the medium through which our encounters with technology and patterns of change are experienced and understood. It provides a language through which concerns and interests are explored.

The confluence of these phenomena makes for an exciting backdrop against which to ask the perennial questions concerning humanity. It is the asking of questions within such a context that produces and requires the use of a diverse range of approaches and epistemological registers. The papers collected here are as presented at the conference and represent a truly diverse international body of opinion They draw upon a wide range of discursive strategies to examine ideas of humanity within what has loosely come to be known as 'cyberculture'. From one perspective are those approaches that seek to reveal some new aspect of the experience of living within cyberculture. These papers are collected in the first section entitled 'Living Within Cyberculture Today'. Here attention focuses upon the nature of life within an era of intense social political and technological change. Attention is focussed upon the way in which technology is understood to intersect into the various social systems that provide meaning and structure to lives in contemporary society. We may argue that technology makes itself manifest at a multiplicity of levels; it transforms economies, bringing about entire industries; it modifies work and social practices, offering new pathways of communication and making redundant older means of communication; it intersects in the very form of our messages take, bringing about new communicative patterns and consequentially new ways of understanding and being in the world.. The first papers in this section deal with the concrete usages and influences of the internet and other technologies (particularly surveillance technology), the second part aims more at understanding the political and philosophical implications of cyberspace and cyberculture.

Raising the question of what implications globalisation – as brought about by the Internet – will have on cultural distinctiveness, Mohamed Salah Eldin Abdel Wahab aims to assess whether the world is moving towards cultural homogenisation or polarisation. Comparing and critiquing different theses of cultural globalisation, he comes to the conclusion that the process is inherently paradox and shows that cultural reality does not fit an either-or pattern, but is in a constant, complex state of flux.

Marcus Leaning also aims to explore the meaning technology – and particularly Internet technology – takes on in today's cultures. Arguing decisively against a belief in the neutrality of technology, he maps out the ways in which technology has been understood and what beliefs about technology are circulating, showing that it directly intersects into the micro-

life world of the individual. Therefore, sociology and the philosophy of science need to understand technology as a component of the social world that is by no means passive but creates the ways in which we can communicate and therefore create an (online) identity.

Several papers in this section are focused on research concerning different online communities. Debbie Herring analyses and explores a religious online community in the UK from the perspective of contextual theology. In this paper she elaborates on two of the many findings she was able to discern. The first is the fact that the members of the community interact in a shifting, apparently random movement. She offers the model of *perichoresis* to understand this chaotic movement in finite space, which literally means 'dancing around'. The second important phenomenon is the manifestation of behaviours that can be described in terms of faith and action – or praxis. Delineating four different forms of praxis, Herring shows that it is this commitment to praxis that holds the community together.

Jill Arnold and Hugh Miller undertake a review of their past work on how people conceptualise the cyberculture of working life. By researching women academics and their uses of the Internet, they created a feminist cyberpsychology. Their aim is to delineate how women create a multi-layered and multi-functional identity by focusing on how women voice ideas and interact with others, how gendered bodies must be taken into account – even when considering virtual identities – and how women treat space and place within cyberculture.

Also focusing on women, Yael Rozin explores an online lesbian community in Israel. She analyses which impact an online community has on the construction of a self-conception as lesbian and in how far it can be a substitute for real life community. Often feeling alienated in the world, many members of the community experience this virtual space as a home or even a secret shelter, which needs to be protected and clearly defined, and thereby creating a community narrative that constitutes the collective.

In the final paper dealing with concrete online communities, Irene Dunn argues that pro-anorexia websites need to be analysed as virtual peer group. She points out that what constitutes a peer group needs to be reconsidered to be able to incorporate non-physical interaction in virtual space. The further significance of pro-ana websites lays in their paradox relation to the body, whose absence in cyberspace only results in an even greater emphasis on embodiment, identity being derived almost entirely from the body.

Ursula Drees and Martin Bayer explore a different issue related to globalisation and technology, that of surveillance. The need for surveillance in order to ensure our safety and security – particularly post-9/11 – is repeatedly stressed. After sketching the increase of new forms of unrestricted surveillance, the authors ask why these are so readily accepted, and offer as

answers three aspects: the change in the relationship between nature and technology, a strong desire for acceptance and conformity within society and the creation of a second self via virtual reality.

In the section concerned with a more philosophical or political orientation, Dominic Williams's paper on a Derridaean reading of cyberspace marks the beginning. He aims to explore the relation of cyberspace and the boundary as such. Drawing heavily on Derrida, he argues that it is impossible to trace the boundaries of cyberspace, as we are never not in cyberspace. Rather, we need to find alternative understandings of space, for which Williams utilises the concepts of *parergon* and *khōra*, in order to conceive a space outside of space.

On a slightly different take on cyberspace, Robin L. Zebrowski focuses not on humans in cyberspace but on the possible emergence of artificial intelligence (AI) within this virtual realm. Pointing out that if an environment is rich enough, intelligence can evolve, she posits that cyberspace might very well qualify as such an environment, enabling the evolution of AI. Exploring the relation between embodiment, the environment and the emergence of intelligence, she goes on to ask where AIs in cyberspace will leave the human, since we can never fully enter this virtual space, as we are less than human without our bodies, whereas AIs are solely and uniquely at home in cyberspace while at the same time being able to enter our environment.

The combination of our human bodies with technology comes under scrutiny in Renata Koba's article when she explores the cyborg metaphor and its uses in understanding the influences of technology on society. Following Donna Haraway, the political implications of the cyborg – both in metaphor and as in real life – are analysed, arguing that a cyborg politics has the power to move beyond the artificial constructs of gender, race and class and therefore has great libratory power which should not be perceived as restricted to the privileged few.

In his paper on cyberpunk, Istvan Csicsery-Ronay, Jr. delineates this literary genre in its historical evolvement and its political implications. Arguing that science fiction is a genre of Empire – the literary expression of a fantasy of a global technological regime – he points out the similarities in the characteristics of cyberpunk's aesthetic vision and the characteristics of postmodern Empire.

Looking at cyberpunk politics from a different angle, Joshua Raulerson uses the structuralist concept of *bricolage* to explore Bruce Sterling's political programme, foregrounding its relation to hacking, a central practice in cyberpunk politics. Using recent events in subculture, he points to the applicability of cyberpunk agendas, showing how hacking can be read as a way of dealing with questions of ownership, control and the power-struggle

over meaning, as well as a resistance to commodification and consumption, authoritarianism and market determinism.

The second part of this book – 'Imaginings of Future (Cyber) Worlds' – focuses more on fictitious explorations about what life might be like in an even more technologised future. Discussing films, novels, short stories and art, these articles aim to understand where current trends and developments in society might take us and how technology may or may not benefit humanity and the human. The issues these papers deal with range from the question of what constitutes 'humanity' in the first place, to different issues related to 'humanity' such as reality, religion, individual freedom, the body, gender and sexuality and how these evolve and change through interaction with technology and a technologised society. The first part of this section explores humanity as such in relation to technologies, whereas the second section further introduces the issue of bodies, sexuality and gender.

The attempt to find a definition for humanity is the aim of Sylvie Allouche's paper. She points out that the dialectics between humanity as humanness and humanity as humaneness are a recurring theme in science fiction. She then goes on to analyse Greg Egan's fiction, delineating how he explores several forms of modification of the human in his stories, thereby questioning what it is that constitutes 'humanity'.

An important question in the formation of humanity and human society is the relation between individual freedom and social obligations. Dena Hurst demonstrates how Robert A. Heinlein deals with these issues in his novels, arguing that while his heroes usually are antagonists to the restrictions of society, Heinlein is not an anarchist. Rather, he accepted that human beings have to live in groups and learn to deal with the discrepant desires of freedom vs. security. Just how that balance is to be found is not answered by Heinlein but he astutely recognised the problem that in if one has freedom within a society one must minimize the exercised of that freedom in order for society to function.

How we understand humanity is also closely related to how we understand reality which is an issue Giuliano Bettanin explores in his paper on possible worlds. Pointing out the difference between Philip K. Dick and William Gibson's possible worlds, he demonstrates that while both question objective reality, Dick still searches for the truest manifestations of human nature where Gibson has moved on to search for new ways to interpret and conceive humanity, outside of present categories.

The postmodern search for meaning and the yearning for modernist certainties is also the topic of James F. McGrath's paper on *The Matrix* films, showing that these films are at the same time deeply postmodern in style and content while also reflecting the hunger for myths that explore 'timeless issues in a timeless manner'. The focus here is mainly on religious myth and story, arguing that the films mirror contemporary attitude to religions as a pool from

which to pick and choose whatever seems suitable, and emphasising the problems and contradictions that arise from this practice.

Andrew P. Saunders analyses the shift of paradigm of sublimity by using two cyberpunk stories by Bruce Sterling/William Gibson and Tom Maddox. He delineates two different strands of the sublime in the postmodern era, the first constituting the sublimity of the rational human, which is expressed in the grand and monumental moments and creations of humanity. The second he calls 'cyberpunk techno-mysticism' which includes an aspiration to transcendence and the reconfiguration of the machine as mythical entity.

In Pawel Frelik's paper technology and machines and their relation to humanity are explored from a different angle. Focussing on sub-intelligent technology – which is rarely explicitly discussed in science fiction – Frelik uses three stories by Pat Cadigan, Bruce Sterling and Greg Bear to show the menacing and savage face this technology might reveal. Our fears are often directed towards Artificial Intelligence (AI), but while this is still usually modelled on the human, sub-intelligent technology is devoid of any mind or personality, therefore it cannot be reasoned with and it knows no master. As its very nature is antithetical to anything human or even biological, it may well be the most dangerous threat to humanity.

Utilizing Judith Butler and Monique Wittig, Cristina Alfonso Ibáñez analyses what happens when questions of sex and gender enter science fiction. She argues that Joanna Russ's novel *The Female Man* aims to critique the 'straight mind'. Even though it does end up reinscribing heterosexual institutions, the frailty of gender construction is laid bare nonetheless.

The construction of gender and whether the heterosexual paradigm is reinforced or subverted is also the question Hannah Ovnat poses in her article. In her gendered reading of the two films *The Matrix* and *eXistenZ* she illustrates that while both films actually destabilize gender and heterosexuality, *The Matrix* uses an essentialist, non-reality-challenging conceptual framework that, ultimately, reinforces a notion of humanity that is based on the superiority of the human spirit as expressed in heterosexuality. Contrary to this, in *eXistenZ* gender roles and sexual practice do undergo transcendence thereby challenging our perceptual constructs.

The gendered, technologised body comes under scrutiny in Birgit Pretzsch's paper on Bruce Sterling's novel *Holy Fire*. Reading the body from several perspectives, she aims at a 'thick perception'. Utilising Foucault's ideas combined with feminist thought, she shows how the female body is constructed as a border case, at once being perceived as controlled and as transgressive, as belonging to nature and as belonging to the realm of culture.

The body and its relation to technology is also the focus of Heinrich Deisl paper that analyses the underground cult manga *Tetsuo*. The metamorphosis of a human body into a cyborg is dissected in relation to issues

of sexuality, imploring the implications for the physical body as well as the interaction between humans and machines.

Carlos Arenas explores the historical development of cyborg iconography, which commenced in the 1960s with US American science fiction comic books and French sf illustrators. Covering a large terrain from manga and animé to Giger and biomechanics, Stelarc and postmodern cyborg cinema, he illustrates how changes in technologies are reflected in the changing representations of cyborgs, reading the cyborg as metaphor for aspects of human behaviour and the human condition.

PART I

Living within Cyberculture Today

Cyberspace, Culture and the Local-Global Nexus

Mohamed Salah Eldin Abdel Wahab

Abstract
The world, in the age of globalisation, has grown more global and more divided, more interconnected and yet partitioned, cultural boundaries are being simultaneously permeated and re-established. With the progressive development of technology – the driving force of globalisation – a new globally networked computer-sustained multidimensional virtual reality has been created: the Internet. This network of networks has eroded physical territorial barriers, and created a parallel virtual community that has spawned its own culture, and catalysed the process of cultural interaction. This paper analyses the role of the Internet in intensifying cultural interaction and the emergence of a new cyber culture. It examines the local-global paradox and the possible threat to cultural distinctiveness brought about by the Internet. The paper also provides a critique of the different theses of cultural globalisation: the homogenisation thesis, the polarisation thesis, and the hybridisation thesis.

Key Words: Cyberspace, technology, culture, local-global paradox, cultural globalisation.

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1. Introduction

Globalisation is widely viewed as one of the most powerful forces shaping the modern world and a key idea explaining the transition of the human society into the third millennium.[1] People consider globalisation a tidal wave sweeping over the world and profoundly influencing every aspect of our lives in all disciplines: politics, economics, law, social relations, and culture.

Despite the inherent difficulty associated with defining globalisation, many scholars across various disciplines have offered diverse definitions. Cochrane, Allan, and Pain define it as a process that 'involves an intensification of flows and networks of interaction that transcend the nation-State as well as increasing interpenetration of economic and social practices, which in turn promote cultural interaction at the local and global levels.'[2] Robertson refers to globalisation as 'the processes of the compression of the world and the intensification of consciousness of the world as a whole.'[3] Giddens defines it as 'the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa.'[4]

With the progressive development of technology – the driving force of globalisation – the information society became a global reality.[5]

The technological revolution that gave birth to the Internet and satellite telecommunications has enabled people to remain in their place, but yet witness all incidents happening in all areas across the globe at the very moment they are taking place, maybe even before other parts of the same nation. The world is brought to us through small screens, electronic cables, and wireless devices. Technology has intrinsically altered the scale on which human affairs take place; it has fostered an interdependence of local, national, and international communities that is far greater than any previously experienced.[6]

The present paper aims to explore and analyse the role of the Internet in intensifying cultural interaction and whether a new form of cyberculture is emerging. It aims to assess the impact of the forces of globalisation and localisation on cultural interaction and whether the world is moving towards cultural homogenisation or polarisation. Accordingly, the paper will be divided into two parts: (I) assessing the impact of the Internet on culture and analysing the local-global nexus; and (II) analysing cultural globalisation.

2. Cyberspace, Cultural Interaction and the Local-Global Nexus

Cyberspace is a placeless society, in which data becomes accessible from almost any point on the globe; it is a map of relations between people.[7] [8] Cyberspace is an imagined continuous, worldwide, networked city; the global city that never sleeps, always experienced in real time.[9]

The revolutionary technological advancement brought about by the Internet has resulted in unprecedented increase in cultural interaction between millions of people from diverse backgrounds and cultures. This accelerated and instantaneous exchange of information and cultural patterns and practices has resulted in a new crystallised form of cyberculture: a culture that is shared by citizens of this virtual community 'netizens.'[10]

Netizens see themselves in a community parallel and comparable to traditional communities of nations, ethnicities, religions, and geographical cities, but transcending the limitations of these communities with a new technology that makes place, time, cultural barriers, and local governments irrelevant.[11]

Proponents of the globalisation thesis consider cyberspace an opportunity to gain access to knowledge and services from around the world in an unprecedented manner, and a medium that promotes information exchange, cultural interaction, and more tolerance and understanding towards foreign cultures and traditions, which could generate a feeling of togetherness. On different note, proponents of localisation view cyberspace as a catalyst for the worldwide diffusion of dominant cultures through the

global marketplace: a form of cultural imperialism, in which Western values will dominate and indigenous and local cultures will become extinct.[12]

This inherent tension between the two camps is part of the global reality concerning cultural interaction. Nevertheless, both camps recognise the importance of using cyberspace as a mass media information tool playing an integral part in cultural interaction and internationalisation, and as a maintainer and protector of cultural links and identity.[13]

Culture represents the set of practices, values, beliefs, and customs acquired by individuals as members of a distinctive society, and those resulting from interaction between people, which have accumulated, assimilated, and passed on to following generations.[14] Thus, each individual learns, interacts, and communicates with the society and through such a process s/he is being culturally shaped. This process of cultural acquisition is referred to as 'Enculturation.'[15]

Enculturation takes place over three levels:[16] (a) the level of unconsciousness where our shaping by a particular set of social practices and values acclimatise us to how we comprehend self and the world; (b) the level of consciousness but beyond our control where human behaviour is founded on the reaction and compliance to the pressure exerted by the surrounding social forces. Under this level, some people are forced to comply with the same values adopted by the majority of people in their society and which may differ from the formers' own;[17] (c) the cultural supermarket level where people are free to pick and choose the values and ideas they want. This is a level of both consciousness and control. This last level is further facilitated by the forces of globalisation, which sustain an ever-increasing chain reaction of cultural interaction.

On such basis, culture and enculturation are certainly affected by globalisation and technological advancement, which have opened new windows on the world: windows through which we can see both the wonder of it all and the things that make us wonder about it all.[18]

We are witnessing a global cultural ecumene (a region of persistent culture interaction and transformation); a medium of interaction and interpenetration between universalism and particularism. This global nexus reflects the tension between cultural homogenisation (the creation of a global cosmopolitan culture) and cultural heterogenisation (preserving distinctive cultural identities) and as such promotes global cultural interaction.[19]

3. Cultural Globalisation: Homogenisation, Polarisation, or Hybridisation?

As previously mentioned, globalisation has dilapidated cultural barriers through contemporary flows of commodities, capital, people, and values.[20] Nevertheless, it has triggered 'antibodies': trends of localisation, which aim at preserving cultural distinctiveness and diversity.

Assessing the impact of globalisation on cultural patterns is a problematic issue because several conflicting theses about the emergence of a unified global culture, cultural polarization, and cultural hybridisation have been advocated. Thus, it is necessary to give a brief analysis of these theses before scrutinising and assessing the true nature of cultural globalisation.

A. Homogenisation and Cultural Cosmopolitanism

Proponents of the global world culture thesis argue that the rise of supraterritoriality has given people all over the world unprecedented shared orientation under the influence of global markets, global organisations, global mass media, global monies, and global symbols.[21] This has generated a condition of 'fellow-feeling,' the intensity of which is directly proportional to the propensity to perceive shared interests.[22]

Dore argues that the efficiency of an industrial world system requires cultural convergence and that the increasing density of communications is leading to an increasing fleshing out of a skeletal 'world culture,' and its diffusion to larger number of people.[23] Similarly, Rosenau argues that cultural commitments exclusivity is not protected against external influences depicted by the tides of globalisation. Thus, a medium of global culture is created.[24]

Robertson acknowledges that the cultures of particular societies are an outcome of their interaction with other societies in the global system, and by the same process of interaction between national societies distinctive global culture is partly created.[25] Other writers have been so explicit to acknowledge the emergence of a global mass culture for a single worldwide civilisation of humanity.[26] According to such views, culture is considered an inconclusive element of differentiation.[27]

It has been argued that the popular version of the homogenisation thesis is that which associates globalisation with Westernisation or Americanisation. Cultural cosmopolitanism is envisaged as the self-presentation of the dominant particular. It is the hegemonic sweep at which certain local particularities try to dominate the whole scene, to mobilise the technology and to incorporate a variety of more localised identities.[28] In a nutshell, it is a form of cultural imperialism.[29]

The process of cultural interaction and globalisation does not mean in its true sense that the world should be dominated by a single logic or culture. Thus, it should not be considered a process of Westernisation or imposition of a western cultural model, but rather a process aiming at achieving mutual respect and trust, and searching for common interests, values, and principles stemming from our common human nature.

B. Cultural Polarisation: Clash and Divergence

The polarisation thesis advanced by Huntington is built on the realisation that the dynamics of the contemporary world are far from being dominated by a single logic.[30] Huntington argues,

> It is my hypothesis that the fundamental source of conflict in this new world will not be primarily ideological or primarily economic. The great divisions among humankind and the dominating source of conflict will be cultural. Nation states will remain the most powerful actors in world affairs, but the principal conflicts of global politics will occur between nations and groups of different civilizations. The clash of civilizations will dominate global politics. The fault lines between civilizations will be the battle lines of the future.[31]

He defines civilisations as distinct cultural entities each possessing common objective elements, such as language, history, religion, customs, institutions, and subjective self-identification of people.[32] His opinion is that the world is divided into seven or eight major civilisations, which will be in future conflict.[33] His argument is based on several reasons, which he believes will cause an inevitable clash:[34] (a) differences among civilisations are not only real; they are basic; (b) as the world is becoming a smaller place, interactions between diverse cultures are increasing. These increasing interactions intensify civilisation consciousness and awareness of differences between civilisations; (c) the processes of economic modernisation and social change throughout the world are separating people from longstanding local identities. They also weaken the nation state as a source of identity; (d) cultural characteristics and differences are less mutable and hence less easily compromised and resolved than political and economic ones; (e) successful economic regionalism will reinforce civilisation-consciousness.

Huntington ends his argument by the saying:

> It will require an effort to identify elements of commonality between Western and other civilizations. For the relevant future, there will be no universal civilization, but instead a world of different civilizations, each of which will have to learn to coexist with the others.[35]

The polarisation thesis seems to have two main strengths: (a) it reflects the inherent tension between globalists and localists concerning the globalisation of culture; (b) it draws attention to an irreducible divergence of cultural patterns in the new world order.[36] However, Huntington's polarisation thesis is not immune against criticism. Firstly, the notion of

separate and distinctive cultures and civilisations as advocated by Huntington is vastly exaggerated and over inflated within the global field.[37] It is true that there are existing differences yet, commonalities stemming from the increasing shared interests, common nature of mankind, and progressive cultural interaction equally exist. Secondly, Huntington himself argues that these different civilisations would have to learn to co-exist with each other. Thirdly, it is true that cultural differences are less mutable and hence less easily compromised than political and economic ones, yet this does not deny the existence of interaction and similarities (at least to a certain acceptable extent). Despite being a slow process, it is an ongoing dynamic one as well. Culture has a sharp edge that is now being mitigated.[38]

Despite being thought-provoking, Huntington's thesis has not been totally accepted by other scholars.[39]

C. Cultural Hybridisation

The central argument of proponents of the hybridisation thesis is that the increase in intensity of cultural interaction brought about by the process of globalisation promotes the dissolution of the link between culture and territory or place. Accordingly, the process of disembeddedment of cultural practices produces complex hybrid forms of culture.[40]

Hannerz argues that there is now an emergent world culture with no total homogenisation, but one network of social relationships with a flow of meanings, people, and goods between its diverse regions.[41] Thus, cultures rather than being separated from one another as the hard-edged pieces in a mosaic, tend to overlap and mingle.[42]

Proponents of the hybridisation thesis such as Hannerz ascertain the existence of a global cultural ecumene; a medium of persistent cultural interaction and exchange, which embraces subcultures of the whole. These sub cultures are only separated by nebulous boundaries.[43] This process is called creolisation.[44]

Similarly, Smith views the emergent global culture as deterritorialised and a true mélange of disparate components drawn from everywhere and nowhere, borne upon the modern chariots of telecommunications systems.[45]

In conclusion, the hybridisation thesis is based upon the fundamental effect of cultural interaction in shaping the global culture, which does not displace or totally substitute distinctive local cultures, but affects them, mingle with them and dwindle the barriers that separate them. However, the hybridisation thesis remains unclear about the extent and limits of hybridity as the chosen cultural form.[46]

4. Analysis: The Globalisation of Culture and Cosmopolitan Vernacularism

The world, in the age of globalisation, has grown more global and more divided, more interconnected and yet partitioned, cultural boundaries are being simultaneously permeated and re-established, transcended and re-invented by complex processes of social changes.[47] At the turn of the millennium, tidal waves of cultural interaction enabled people to share cultural influences on a global scale and conduct significant parts of their lives in common.

Similarly, the polarisation thesis seems to exaggerate and magnify cultural differences, which are overall declining rapidly.[48] It presents a powerful model of cultural relativism. However, culture is not only about differences and the rapid and powerful pace of cultural interaction is undeniable.[49]

The hybridisation thesis stands somehow in the middle and seems acceptable; nevertheless, it does not solely provide an adequate explanation.

Individually, all three theses fail to take into consideration all relevant factors and realities in search for an adequate explanation of the cultural globalisation process. On such basis, one could say that globalisation with all its economic, technological, ideological, and social trends does carry the seeds of cultural convergence and homogenisation, understood as openness towards different and divergent cultural experiences, to the extent that intercultural competence as well as intercultural experience ensue. This is the true essence of cosmopolitanism.[50]

Being a citizen of the world implies the possession of cultural disposition, which is not limited to constraints of locality, but recognises global belonging, openness to the diversity of global cultures, and preparation to understand and respect cultural perspectives of others. The local and the global do not inherently exist as rivals or cultural polarities, but as mutually interpenetrating principles.[51] The present tension between the local and the global stems from the fears of being dominated by occidental culture because the West possesses the technology that drives the wheels of globalisation. However, if we think of the cultural interaction process in the global ecumene, it would be obvious that besides being a two way process, it takes place in all levels of enculturation (consciousness and unconsciousness). It should be noted that, in a market economy operating under the rule of law, it is in the people's own interest to respect the cultural patterns and interests of others.[52]

In the new global order, the sense of togetherness, fellow feeling, and shared interests are increasing, which facilitates homogenisation and convergence. A global culture is in the making and systems are converging, but traditional local cultures will not be totally abolished; they will continue

to co-exist with cosmopolitan practices. However what is threatened is the idea of exclusive and virtually self-sufficient national cultures.[53]

The world is shrinking under the influence of global economy and technological advancements. Accordingly, more and more convergence will occur as signs of commonalities and respect transcend barriers of differences. Tensions occur when respect and mutual trust is lacking. Nevertheless, we are witnessing some common values adopted by all nations and cultures as a condition for their very survival.[54]

5. Conclusion

Instantaneous global communications brought about by the Internet, satellites, and interactive television have generally increased inter-societal relations and interaction. More particularly, the Internet revolution has resulted in the creation of an imagined virtual community: cyberspace that parallels the world of physical space. This virtual community, which has become an integral part of our global reality, has spawned its own cultural practices and patterns that are shared by its citizens who are equally enmeshed in the real world, and thus fostered a medium of global cultural interaction and interpenetration between diverse cultures.

This ongoing process of cultural interaction and information exchange facilitated and accelerated by contemporary trends of globalisation has rendered culture and enculturation in continuous state of flux. Traditional and existing cultural patterns and practices are being transformed, interpenetrated, and reshaped by internal and external trends of change and interaction. However, as any form of change involves resistance to that change, cultural transformation in the global age has necessarily generated regional and local pockets of resistance, which aim at preserving local identities and indigenous cultures. This global-local paradox is inherently embedded in structure of the cultural globalisation process.

Accordingly, the three cultural globalisation theses mentioned herein above fail to provide, individually, a clear picture of the global cultural reality. It is true that cultural interaction both in cyberspace or in the physical world has affected and transformed existing local cultures, yet this does not entail total homogenisation or erosion of existing local identities and the domination of a single culture. Similarly, preservation of local cultural patterns and values does not entail isolation or denial of change. The hybridisation thesis appears to be the closest in providing an accurate analysis of cultural globalisation nevertheless, it remains unclear about the limits of hybridity.

To sum up, the focal point of cultural reality rests on the idea of 'co-existence.' The emergence of a new cosmopolitan culture as the offspring of cultural interaction and mutual interpenetration coexists with local influenced cultures. A global culture is in the making and systems are converging, but

traditional local cultures will not be totally extinct, they will continue to co-exist with cosmopolitan practices. On such basis, the Mahatma Ghandi was right when he said:

> I do not want my house to be walled in on all sides and my windows to be stuffed. I want the culture of all the lands to be blown about my house as freely as possible. But I refuse to be blown off my feet by any.

Notes

[1] M Waters, *Globalisation*, Routledge, London, 1995, p. 1; L Brittan, *Globalisation vs. Sovereignty? The European Response, The 1997 Rede Lecture and Related Speeches,* Cambridge University Press, Cambridge, 1997, p. 1. Many writers and futurologists expressed the profound change occurring across the world in all disciplines. We saw McLuhan optimistic concept of the 'global village' as an expression of the fundamental revolution in media and communication. M McLuhan, *Explorations in Communication*, Beacon Press, Boston, 1960. Similarly, Alvin Toffler spoke of a new technological revolution in this era, resulting in the demassification of mass production. He argued that this revolution represents the third wave in the history of human society evolution. The first two waves were the agricultural and industrial revolutions. See A Toffler, *The Third Wave*, Pan., London, 1981.

[2] A Cochrane & K Pain, 'A Globalising Society?' *A Globalizing World Culture, Economics, Politics*, Routledge, London, 2000, p. 16.

[3] R Robertson, *Globalisation, Social Theory and Global Culture*, Sage Publications, London, 1992, p. 8.

[4] A Giddens, *The Consequences of Modernity*, Stanford University Press, Stanford, 1990, p. 64. Giddens argues that globalisation is a consequence of modernity, which is inherently globalising. It involves time-space distanciation. According to him this constitutes the prime condition for the processes of disembedding, which involves the lifting out of social relations from the local contexts of interaction and their restructuring across indefinite spans of time-space. See 3, 20-21, 63. However, Robertson is opposed to such a view as he is of the opinion that globalisation should not be equated or viewed as a direct ramification of an amorphously conceived modernity. See Robertson, 8.

[5] The information society, the offspring of the union between computing and telecommunication, was a term coined by futurologists such as Alvin Toffler to refer to the society in transition towards the third wave: the technological revolution that is characterised by demassification of mass production. It was

not very long ago since the eminent media thinker, Marshall McLuhan, coined the term 'global village' in the 1960s to express his belief that technological advancement in communications will eventually unite the world. See Toffler; McLuhan.

[6] JN Rosenau, *Turbulence in World Politics*, Princeton University Press, Princeton, 1990, p. 17.

[7] A term coined by W Gibson, *Neuromancer*, Grafton, New York, 1984.

[8] J Everard, 'States, Boundaries and the Globalisation of the Internet,' 1997, 20 May 2003. http://www.anu.edu.au/english/jems/lb/academicpapers/IPEG.html.; L Lawrence, 'The Zones of Cyberspace,' *Stanford Law Review* 48, 1996, p. 1403.

[9] M Irvin, 'Global Cyber Culture Reconsidered: Cyberspace, Identity, and the Global Informational City,' 1998, Accessed 20 May 2003. http://www.georgetown.edu/irvinemj/articles/globalculture.html.

[10] A Mefford, 'Lex Informatica: Foundations of the Law on the Internet,' *Global Legal Studies Journal* 5, 1997, 212; A Chua, 'Culture, Globalisation and the Internet,' Accessed, 15 January 2002. http://www.maj.arts.qut.edu.au/units/mjb336/history/achua.

[11] Irvin, loc. cit.

[12] J Gray, *Endgames: Questions in Late Modern Political Thought* Polity Press, Cambridge, 1997, p. 177; Chua, loc. cit.; W Akande, 'The Drawbacks of Cultural Globalization,' *Yellow Times*, 10 November 2002, Accessed, 25 May 2003, http://www.globalpolicy.org/globaliz/cultural/2002/1110cult.htm.

[13] Chua, loc. cit.

[14] Rentelen defines culture as 'a dynamic value system of learned elements, with assumptions, conventions, beliefs and rules permitting members of group to relate to each other and to the world, to communicate and to develop their creative potential.' AD Renteln, 'Clash of Civilizations? Cultural Differences in the Development and Interpretation of International Law, Cultural Bias in International Law,' *American Society of International Law Proceedings* 92, 1998, p. 233; C Kerr, JT Dunlop, FH Harbison & CA Myers define it as 'that complex whole which includes knowledge, belief, art, law, morals, custom, and any other capabilities and habits acquired by man as a member of a society.' C Kerr et al., *Industrialism and the Industrial Man* Penguin Books Ltd., Harmondsworth, 1973, p. 94; Wallerstein defines it as 'the set of values or practices of some part smaller than some whole.' I Wallerstein, 'The National and the Universal: Can There Be Such a Thing as World Culture?' *Culture, Globalisation and the World-System, Contemporary Conditions for the Representation of Identity*, University of Minnesota Press, Minneapolis, 1997, p. 91; Holton refers to culture as 'both ideas and practices that have in common the function of providing meaning and identity for social actors and which combine cognitive, expressive, and

evaluative elements.' R Holton, *Globalization and the Nation-State* Macmillan Press Ltd., Hampshire, 1998, p. 162; Burns define it as 'the interaction of people and results in learning and that such learning can be accumulated, assimilated and passed on […] culture consists of behavioural patterns, knowledge and values which have been acquired and transmitted through generations, an organised body of conventional understandings manifest in art and artefact, which, persisting through tradition, characterises a human group.' P Burns, 'Brief Encounters, Culture, Tourism and the Local-Global Nexus,' *Tourism in the Age of Globalisation*, Routledge, London, 2001, p. 293-294.

[15] Renteln, op. cit., p. 233.

[16] G Mathews, *Global Culture/Individual Identity, Searching for Home in the Cultural Supermarket*, Routledge, London, 2000, pp. 12-16.

[17] Usage of the word force here denotes not only physical force represented by punishment, but the society's moral reaction towards any resistance as well. Thus, resistance and refusal of compliance is not impossible, but it costs very high price.

[18] J Naisbitt, *Global Paradox*, William Morrow and Company, New York, 1994, p. 192.

[19] M Featherstone, 'Global Culture: An Introduction,' *Global Culture, Nationalism, Globalization and Modernity*, Sage Publications, London, 1990, p. 6; U Hannerz, *Cultural Complexity, Studies in Social Organisation of Meaning*, Columbia University Press New York, p. 218; Robertson, op. cit., p. 100, pp. 102-103, p. 178.

[20] Wallerstein, op. cit., p. 94; T Spybey, *Globalization and World Society* Polity Press, Cambridge, 1996, pp. 5-6; H Mackay, 'The Globalization of Culture,' *A Globalizing World? Culture, Economics, Politics*, Routledge, London, 2000, pp. 49-54.

[21] JA Scholte, *Globalization, A Critical Introduction*, Macmillan Press Ltd., Hampshire, 2000, p. 178.

[22] Fellow feeling means the belief that the society of States requires moral commitment to certain basic rules because of its inevitable continuance as one community of mankind. R Dore, 'Unity and Diversity in World Culture,' *The Expansion of International Society*, Clarendon Press, Oxford, 1985, pp. 407-408, p. 413.

[23] Ibid., 415, 419, and 424. In his support of the idea of emergence of a world culture, Dore is optimistic about the future, as he estimates that the structure of the world order reinforced by the binding ties of the world culture might improve.

[24] Global culture is understood as a set of norms shared on a worldwide scale. Rosenau, 420.

[25] Ibid., 113-114.

[26] GB Madison, 'Globalization: Challenges and Opportunities,' *Globalization Working Papers*, 1998 Accessed 1 June 2003). http://www.humanities.mcmaster.ca/~global/workpapers/madison/98-mad.html; C Levi-Strauss, *Tristes Tropiques*, Plon, Paris, 1955, p. 37, quoted in R Holton, *Globalization and the Nation-State*, Macmillan Press Ltd., Hampshire, 1998, p. 163.

[27] The prevalence of a global cultural supermarket, has instigated recent anthropologists to get rid of the term culture because in today's world of massive global flows of people, capital, and ideas culture could not be thought of as a decisive element in differentiating between people around the globe. Mathews, op. cit., pp. 3-4.

[28] Hall, 'Old and New Identities, Old and New Ethnicities,' in *Culture, Globalisation and the World-System, Contemporary Conditions for the Representation of Identity*, University of Minnesota Press, Minneapolis, 1997, p. 67.

[29] Holton,op. cit., p. 163, pp. 166-173; Mackay, op. cit., p. 60, pp. 79-80; Irvin, loc., cit.

[30] Holton, op. cit., p. 172.

[31] S Huntington, 'The Clash of Civilizations? The Next Pattern of Conflicts,' *Foreign Affairs* 72,3, 1993, pp. 22-49.

[32] Ibid., 23-24.

[33] These include Western, Confucian, Japanese, Islamic, Hindu, Slavic-Orthodox, Latin American and possibly African civilization. He predicts that the clash will occur between these civilizations in general and between the West and the emergent Islamic-Confucian axis in particular. Ibid., 24.

[34] Ibid., 25-27.

[35] Ibid., 48.

[36] Holton, 174.

[37] Ibid.

[38] Northorp said that the East and West 'can meet, not because they are saying the same thing, but because they are expressing different yet complementary things, both of which are required for an adequate and true conception of man's self and his universe'. ESC Northrop, *The Meeting of East and West*, Collier Books, New York, 1946, pp. 454-455, quoted in M Mazarr, 'Culture in International Relations', *Washington Quarterly*, 1993, http://www.globalpolicy.org/globaliz/ cultural/cultur2.htm

[39] Mazarr argues that of the six reasons advanced by Huntington, the fifth is an observation, not a reason. The first is probably untrue as stated. And the other four in fact support an entirely different hypothesis – that the real causes of conflict are socioeconomic, not civilisational; that they are temporary, not permanent; and that they point the way to a unified globalism rather than a parochial culturalism. When Huntington argues that 'cultural

characteristics and differences are less mutable' than others, he may be right, but he is not saying anything about the causes of war – for if those cultural differences do not cause strife, their immutability is irrelevant to the level of conflict. And although differences among civilizations certainly have contributed to causing a number of nasty conflicts, they have been irrelevant to some, served as only one among many factors causing others, and may even have helped avoid war in a few circumstances. The other four reasons – a shrinking globe, the alienating features of rapid socio-economic change, the reaction to Western democracy and consumer culture, and economic regionalism – are not primarily cultural events. They are not caused by culture. They are caused by modernization and globalism: the accelerating spread of modern science, technology, free market systems, and representative democracy throughout the world. Mazarr. Smith as well states that the emergence of cultural areas does not necessarily mean that they are at odds or in conflict with each other. See A.D. Smith, 'Towards a Global Culture?' in *Global Culture, Nationalism, Globalization and Modernity*, ed. M. Featherstone (London: Sage Publications, 1990), 185-186.

[40] J Tomlinson, *Globalisation and Culture*, Chicago University Press, Chicago, 1999, p. 141; Scholte, op. cit., pp. 180-181.

[41] U Hannerz, 'Cosmopolitans and Locals in a World Culture,' *Global Culture, Nationalism, Globalization and Modernity*, Sage Publications, London, 1990, p. 237.

[42] Ibid., 239.

[43] Hannerz, op. cit., p. 218.

[44] Creolization is a term advanced by Hannerz to refer to the 'process where meanings and meaningful forms from different historical sources, originally separated from one another in space, come to mingle extensively.' Ibid., 96.

[45] Smith, 177. Tomlinson ascertains that deterritorialisation of culture results in hybridisation. He defines deterritorialisation of culture as the 'loss of natural relation of culture to geographical and social territories' Tomlinson, 107.

[46] Holton, 184.

[47] C Geertz, 'The World in Pieces: Culture and Politics at the End of the Century,' *Focaal: Tijdschrift Voor Antropologie* 32, 1998, pp. 107-110; Holton, op. cit., p. 187.

[48] Madison, op. cit., p. 8.

[49] Tomlinson, op. cit., p. 68.

[50] Hannerz, op. cit., p. 239. The etymology of the term 'cosmopolitan' is: '*kosmos*' which is the Latin word for 'world' and '*polis*', which is the Latin word for 'city'.

[51] Tomlinson, op. cit., pp. 185-186, p. 196.

[52] Madison, op. cit., p. 14.

[53] P Hirst & G Thompson, *Globalisation in Question, The International Economy and the Possibilities of Governance*, Polity Press, Cambridge, 1999, p. 266.
[54] Madison, op. cit., p. 15.

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The Influences of Technology: Understanding How Technology Contributes to Who we are Online

Marcus Leaning

Abstract
This paper seeks to propose a cross-disciplinary approach to the study of interpersonal communication using new media and of the electronic presentation of self by drawing upon the philosophy and social study of technology and computer mediated communication. Within the field of computer mediated communication much has been written about the extent to which interpersonal communication enabled by the Internet and other forms of new media technology leads to the formation of 'new spaces'. Several authors have argued that such is the radical nature of the new spaces that participants, may experiment with, and even challenge hegemonic systems of identity formation. A qualifying argument to this claim is offered. While in much previous work Internet technology is regarded as a neutral, passive yet enabling conduit through which communication may take place here a critical stance is taken towards technology. In this paper Internet technology is understood in the 'critical substantivist' terms of authors such as Feenberg, Latour and Chandler. Technology is regarded as something that far from being 'neutral', it is in fact a value-laden cultural artefact. Further in using the technology to communicate the user may be influenced in their presentation of self by the technology.

Key Words: Substantivism, Internet, identity, new-media technology, interpersonal communication.

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1. Introduction

Of the numerous instances of change that are understood to stem from the widespread use of the Internet and associated technologies, it is the transformation of identity that has perhaps most caught the attention of commentators of the more individualised societies of late Modernity.[1] Such a focus is understandable, identity has proven a field of considerable interest in recent years; as Giddens notes there has been a dramatic increase in the forms of cultural life that specifically address questions of identity, interpersonal relationships and self hood.[2] Furthermore, identity and its study intersect with many other fields of enquiry. New media are not excluded from this interest and numerous modes of approach that entail the dual-study of identity and new media have emerged. A number of themes, questions and approaches are discernable in the literature regarding the Internet and issues of identity. Here

for reasons of brevity, only two such threads are described. This selection is not intended to represent any form of systemic overview of the state of the field and they have been selected for no more reason than they are typical of forms of approach of the field.

The first approach concerns the numerous claims that have been made about the textual nature of various forms of Internet communication and the ephemeral nature of identity. Such studies examine the way in which the textual nature of Internet communication offers an 'alternate' space in which we can interact in a stripped down or a 'cues reduced' form.[3] A considerable amount has been written about 'identity' and the various forms of communication, both synchronous and asynchronous, which take place using the Internet and associated technologies.[4] Early authors such as Sherry Turkle envisaged the 'new space' of the communication systems on the Internet as a 'social laboratory for experimenting with the construction and reconstruction of the self that characterises post-modern life.'[5] The essential core of such claims, though with many nuances, is that various forms of computer-mediated communication permit a form of communication between individuals who need only declare such details about themselves as they see fit. The result of which is that interlocutors are often envisaged as inventing 'fantastic' identities for themselves. The plethora of research papers written on such 'virtual identities' or personae in synchronous computer mediated communication has been succinctly, if rather cynically, summed up by David Gauntlett: 'yberspace […] you can play with identity […] nobody knows who you really are […] gosh […]' Gauntlett's quote captures the nature (if not the tone) of the debate adroitly in that he highlights the two key features of the discussion, identity play and the environment or technology that permits such identity play, cyberspace.

Other perceived qualities of Internet technologies, such as the ability to publish information without recourse to the financial or social capital traditionally associated with media production,[7] are also understood to result in a form of identity transformation. However usage of media technology with the capability of content production is understood to lead not to a transformation of personal identity but of political identity. Accordingly, a strand of research concerned with political identity emerges. Dalhberg opines that three distinct camps exist in within this field.[8] A 'Liberal Individualist' camp incorporating euphoric and journalistic accounts such as John Perry Barlow's *Declaration of the Independence of Cyberspace.*[9] A 'Communitarian' position that highlights the shared and community enhancing potential of new media. Here it is envisaged that geographically disparate individuals are able to share in forms of community enabled by new media. Authors such as Rheingold,[10] Wellman and Gulia,[11] and Watson,[12] have explored the ways in which community and non-institutional expressions of democracy can be salvaged by the use of new media. A third

position, described as 'Deliberative Democracy', examines the notion of the Habermassian Public Sphere in relation to the use of new media. This position, advocated by authors such as Fernback and Moore amongst others,[13] proposes that the new technologies offer a means of rectifying the distortions to forms of communications from intrusive state bodies, and a reassertion of the bourgeois public sphere and idealised speech communities of early Modernity. Dalhberg notes that while reference is made to the public sphere in individualist and communitarian accounts, in deliberative accounts it is the full focus of attention.[14]

2. Assumed Technology

The identity and politically orientated accounts of the Internet both address in considerable depth the different conceptions of politics and the fundamentally differing accounts of the individual. However, the accounts are also typical of most examinations of identity and the Internet in that they appear to utilise a largely unquestioned conception of technology. Attention is focussed upon identity and person-to-person interaction. Technology functions as 'scenery' and is hardly examined in any more than descriptive terms. Where technology is addressed it is discussed in a superficially functional and instrumental fashion, technology forms a background against which the greater projects of identity play are carried out. This general problem manifests itself across the field of new media and Internet studies. Even those approaches in the study of new media regarded as 'formalist' have tended to utilise un-deconstructed conceptions of technology.[15] Such accounts rely upon inherited and largely unquestioned notions of the qualities (interactivity being primus-inter-pares) of new media. Those who study new media are not singularly to blame in this regard, Escobar notes that social theorists have often ignored technology.[16] Technology operates as an unquestioned aspect of the social world, being present yet unacknowledged in many accounts. Moreover much academic work, both social scientific as well as scientific, uncritically incorporates general inherited assumptions regarding technology.

The origins and development of such assumptions are complicated and of considerable bearing in accounts of new media. They provide the framework through which new media is encountered and understood in what may be termed the Modern commonsensical view.[17] Such a view relies upon underlying 'logics' and understandings of technology. The advent of new media has resulted in considerable articulation of such beliefs. These beliefs may be brutally paraphrased as follows:

A. Technology can Change Society for the Better

Technology is understood as a tool for development, a device by which a nation-state may improve the quality of life of its citizens. For

example, in a statement by The Welsh Assembly detailing its 'Information and Communication Strategy' it is contended that:

> Many of us are now using computers, mobile phones and the Internet…These technologies have the potential to transform society and the economy in Wales; they are already doing so in many parts of the world. The choices we make now - about which new technologies we use and, more importantly, how we use them – are crucial to the future of Wales and will help us to create a Better Wales![18]

Similarly, Malaysia plans to 'leapfrog into the Information Age', developing of a 'multimedia super corridor', a region of technological development incorporating purpose-built cities and a university, all underpinned by highly developed technological infrastructure.[19]

B. Technology is Neutral

As all technology is utility orientated it does not serve any agenda, political or otherwise, outside of its purposive use. Technology itself has little or no 'value-ladeness' it is 'clean' and subject entirely to the will of the user. Accordingly technology is vindicated of complicity in any anti-social acts committed with it; as goes the argument of firearms supporters in the U.S.A.: 'guns don't kill people, people kill people.'

C. Technology is Under Human Control

Technology merely extends our intention; it is entirely subject to our will. We do not accept that technology can do things beyond our wilful intention. While as noted above, technology can change a society it rarely changes the individual using it. Changes when they do occur are deemed pathological, an addition or illness.[20]

Accordingly, an interesting and even contradictory view or discourse of technology emerges. Technology can be used to improve lives but on its own without intention it can do nothing. It can change the way our lives are lived by increasing the standard of living but it is always subject to our own decisions, we are responsible for the outcomes of technological use. Whilst it is so very potent it is never the less devoid of any politically affective potential, it is neutral.

However these ideas of modern technology seemingly rely upon deeper and/or more historical notions of not just media technology or even high technology in general, but arguably all forms of artifice. Modern discourse surrounding technology incorporates a range of contradictory perspectives. The current commonsensical understanding of new media and

technology likewise includes and oscillates between a number of conflicting viewpoints

In exploring ontological issues and questions of technology Andrew Feenberg identifies four distinct discursive positions within the discourses of Modernity on the potential of technology.[21] These four positions are ranged along two axis, the extent of the autonomy of technology and the degree of value-ladeness of technology. The following table is derived from Feenberg's model:

Technology is:	Human Controlled	Autonomous
Neutral	*Instrumentalism*	*Determinism*
Value Laden	*Critical Theory*	*Substantivism*

Regarding technology as both neutral and under human control Feenberg notes that Instrumentalist assumptions concerning technology have been understood as an application of the Weberian 'instrumental rationality' that developed within early Modernity.[22] Descendent forms of such logic are evident in many post-war utopian projects that sought technological fixes to social problems. Winner notes innumerable instances of such approaches.[23] Determinism, Feenberg contends, is associated with traditional Marxist approaches in which technological development, while to a degree outside of human control, is bereft of any cultural logic of its own.[24] Such a belief in the lack of cultural logic being integrated into technology is challenged by the Romanticist fear that technology incorporates values and in some way 'en-frames' the user into specific lifestyles and actions. Reborn as Substantivist theories, such accounts see a close link between 'means' and 'ends'. The intention of an action is integrated into the means developed to achieve ends. To propose that ends and means, goals sought and the technology developed to achieve those goals, are radically distinct is disingenuous or even fallacious. This belief is also found within the approach Feenberg terms 'Critical Theory', where technological artefacts are understood to be imbued with the intention of their provenance. The ends to which an artefact is intended to be used are inherently imbued into the means to achieve that end, the artefact itself. Critical theories however, reassert human agency, technology is developed and deployed strictly at the behest of social and political projects. Feenberg advocates this critical theoretical position, that technology is both value-laden yet its use lies under the influence of human and not technological control. For Feenberg, technology constitutes a medium through which systems of power may course and be reproduced.

3. The Potency of Technology at a Micro-Level

However, the total rejection of the influence of technology may prove equally fallacious as a total commitment to it. Feenberg's model seems to propose an 'institutional' or non-personal level of understanding of the role of technology and of the way in which technology is engaged with. Attention is focussed upon macro-aspects of the potential of the technology to intersect with human life. Feenberg's four positions investigate how technology can affect the abstract notion of society while the individual remains largely ignored. This is understandable as philosophical and sociological models consciously operate at institutional or structural levels. However, attempts to close the gap between structural and individualist accounts of human life advocate attention being focussed upon those features of everyday life that do intersect with the individual. Here it is advocated that it is smaller social systems, forms and practices that provide meaning and structure to life.[25] Accordingly, the various ways in which technology directly intersects into the micro life-world of an individual is neglected or perhaps needs to be examined without recourse to macro-level theories.

One possible approach to understanding the micro-level potential of technology lies in the work of Latour.[26] Latour, through the micro-examination of a simple piece of technology, a door closer, examines the way in which technology can impact upon daily life, seemingly outside of macro-political issues. Latour proposes that through the use of technology we integrate ourselves into networks where both the technology and human actors must be considered as having agency (effective if not volitional). Latour examines how we delegate tasks to technology, the labour-saving device, and are in turn regulated by the technology. Technology, argues Latour, regulates our action through our integration into technological systems. We get technology to perform the tasks that are too mundane or difficult for normal people. However, in 'delegating' to technology we accept the way in which the technology will perform the task, that the task will be performed in a specific fashion. This fashion, or way of performance then sets the way in which the task is carried out, and coincidentally encodes the ideological position of the technology's manufacture into the task, and we work with this way of doing the task.

Here Latour is not talking of strict technological determinism but rather of the way in which through delegating tasks to technology we abdicate complete conscious control of that task. Relating this to interpersonal communication through the Internet we can argue that the 'technology' of the software and network infrastructure that allows communication in some way limits the way in which we can communicate or present ourselves.

The technology permits us the opportunity to communicate across vast distances instantaneously but it imposes its own regime upon the way in

which we can communicate. This regime permits only certain methods of communication, and polices this by the default of our usage. The many features of software-packages that are seen at their instigation to free up the user from repetitive or complicated tasks soon form new systems that the user must work within to successfully use the software. We must learn the 'correct' way to use a software-package, it does not simply do what we want. The current communicative technological regime or paradigm is primarily text-based, we can communicate with distant interlocutors using textual systems but in doing so we accept the forms that text-only communication entails. We, the end-user, have previously tried to consciously mitigate these technological restrictions. A good example are emoticons which have proven an effective way of conveying emotion in the face of restrictions.[27] Additionally mobile phone 'txt' messaging codes, such as the dropping of vowels also show attempts at mitigation. However such codes soon become enmeshed within the technological system itself, what started out as a way of subverting the restrictions of the technology now become part of the technology's restrictive power.

This is not to say that other forms of communicative systems may not be developed on the Internet, there is an extensive history of trying to develop 'richer' forms of communication.[28] However each and every system will entail imposing a regime of its own upon the user.

An example may be in order. Currently, the operating system on many PC's purchased through high street resellers is a version of Microsoft Windows. Packaged with Windows is a piece of interpersonal-communication software called 'Windows Messenger.' When connected to the Internet, Windows Messenger allows the user to chat with one or more other Messenger users whose computers are connected in real time to the Internet. In addition to textual communication, users are able to send small icons to their interlocutor, a small heart, an image indicating a hug or a smiling face. However, the user is prohibited, or at least restricted by difficulty from creating their own icons. The available image icons are those supplied by the software manufactures. Users are free to communicate textually but the software manufacturers decide the only imagery that may be used. If we wish to use imagery in our communication we are restricted to the software manufacturers choices and decisions regarding the imagery. An in-depth examination of the various representational ideas and ideology behind the imagery available is beyond the current scope but it could be argued that following representational analysis in other fields there is no reason to believe that imagery is free from ideological bias. Further, empirical research in new media studies has indicated that notionally neutral technology often seems predisposed to benefit certain economic interests.[29]

In using such Internet technology to communicate with others in far-away places we accept the technology's limitations on the way in which we

can communicate. The technology can be said to 'reflect' back upon us, we use technology to perform tasks but our actions, our mode of communication, is in turn structured by the use of the technology.

Daniel Chandler[30] proposes a similar argument. Chandler argues that media shape experience through their 'selectivity.' That is the media 'amplify' or 'reduce' various phenomena of the world, they give us a mediated version of the world. Such selectivity is, according to Postman and in common with Feenberg's Critical Theory approach, attributable to the ideological position of the production of the media.[31]

Accordingly, our model of Internet technology, that which informs much research upon the potential of such technology to 'liberate' or 'empower' the user must be approached with caution. Internet technology, like any technology, may be understood as imbued with the essential situation of its production. Further, while Feenberg asserts that technology is under human control we should perhaps accept such claims with caution. As Latour proposes, use of technology may involve a compromise of free action.

The use of communicative Internet technology may need to be understood not with the euphoric tones that seem to colour debate. Instead, attention should also be focussed upon the conservative and structuring potential of technology.

4. Conclusion

The argument proffered here, that concerns raised in the sociology and philosophy of science when applied to Internet technology may require a reassessment of its 'liberatory' power, involves a modification to the often unquestioned conception of technology.

It is proposed that technology be engaged with and understood as a component of the social world that plays a considerable part in the forms of communication that occur on the Internet. Technology may not be the passive 'background' that it is so often regarded as. Further, our understanding of technology also needs to be fore-grounded in accounts of new media. The epistemology that informs most accounts of the Internet is rife with the vestiges of conflicts concerning the role of technology in social life. To fail to account for such antecedents result in accounts of new media dependent upon a theory of technology that is dangerously a-historical.

Notes

[1] The 'individualisation' or 'detraditionalisation' thesis contends that there is a progressive decline in the influence of tradition in the formation of identity. Instead modern societies incorporate the 'emancipation of the individual from the ascribed, inherited and inborn determination of his or her social

character: a departure rightly seen as the most conspicuous and seminal feature of the modern condition' Z Bauman, *The Individualised Society* Polity Press, London, 2001, p. 144. See also U Beck & E Beck-Gernsheim, *Individualisation: Institutionalised Individualism and its Social and Political Consequences*, Sage Publications, London, 2002.

[2] A Giddens, *Modernity and Self-Identity*, Polity, Cambridge, 1991, p. 14. Hall similarly notes 'there has been a veritable explosion in recent years around the concept of 'identity.'' S Hall, 'Who needs 'Identity'?' *Questions of Cultural Identity*, Sage, London, 1996.

[3] M Jaffe, YE Lee, L Huang & H Oshagan, 'Gender, Pseudonyms, and CMC: Masking Identities and Baring Souls,' Paper presented at 45th annual conference of the *International Communication Association*, 1995 Albuquerque, New Mexico, USA. http://members.kr.inter.net/yesunny/genderps.html. Accessed, 26.02.2001.

[4] Such accounts have typically focussed upon the various chat systems available, IRC, IQC and web based chat. See, for example, H Bechar-Israeli, 'From <Bonehead> to <cLoNehEAd>: Nicknames, Play and Identity on Internet Relay Chat,' *Journal of Computer Mediated Communication*, 1,2 (1995), http://jcmc.huji.ac.il/vol1/issue2 (23.02.2000), and the various 'text based virtual reality systems' such as multiple-user-domains (MUDs) and multiple-user-domains object orientated (MOOs). See for example, E Reid, 'Virtual Worlds: Culture and Imagination,' *Cybersociety: Computer Mediated Communication and Community*, Sage, Thousand Oaks, 1995, pp. 164-183, where real time communication is possible.

[5] S Turkle, *Life on the Screen*, Weidenfeld and Nicholson, London, 1995, p. 180.

[6] D Gauntlett, 'Web Studies: A User's Guide,' *Web.Studies Rewiring Media Studies for the Digital Age*, Edward Arnold, London, 2000, p. 15.

[7] Graham proffers the following: 'compare the Internet with radio and television. Even in these days of indefinitely many radio and television channels, and dramatically reduced costs of basic broadcasting, the possibility of individuals and small groups assembling the resources and know-how to put themselves or their views on air is still severely restricted, so restricted in fact that it is a practical impossibility for most. By contrast, individuals and groups with limited time, resources and skills can avail themselves of the technology of the internet and, literally, present themselves and their message to the world.' G Graham, *The Internet:// A Philosophical Inquiry*, Routledge, London, 1999, p. 69.

[8] L Dahlberg, 'Democracy via Cyberspace,' *New Media and Society* 3,2 (2001): 157-177.

[9] JP Barlow, *A Declaration of the Independence of Cyberspace*, 1996. http://web.missouri.edu/~rhetnet/barlow/barlow_declaration.html. 2.01.2001.

[10] H Rheingold, *The Virtual Community: Homesteading on the Electric Frontier*, Wesley Publishing, Reading, MA, 1993.
[11] B Wellman & M Gulia, 'Virtual Communities as Communities: Net Surfers Don't Ride Alone,' *Communities in Cyberspace*, Routledge, London, 1999, pp. 167-194.
[12] N Watson, 'Why We Argue about Virtual Community: A Case Study of the Phish.Net Fan Community,' *Virtual Culture, Identity and Communication in Cybersociety*, Sage Publications, London, 1997, pp. 102-132.
[13] J Fernback, 'The Individual within the Collective: Virtual Ideology and the Realization of Collective Principles,' *Virtual Culture*, Sage, London, 1997, pp. 36-54; RK Moore, 'Democracy and Cyberspace,' *Digital Democracy*, Routledge, London, 1999, pp. 39-59.
[14] Dahlberg, op. cit., p. 168.
[15] Bolter regards new media theory as being demarcated into either 'formalist' approaches, theories that 'appear to focus on 'internal or even 'inherent' characteristics of the media' or 'culturalist' approaches, theories that focus on 'characteristics that are 'external.'' DJ Bolter, 'Formal Analysis and Cultural Critique in Digital Media Theory,' *Convergence* 8,2 (2002): 77. Similarly and in more detail Lister et al. propose that there is a fundamental debate occurring in accounts of new media concerning 'the power media and technology have to determine culture and society.' M Lister, J Dovey, S Giddings, I Grant & K Kelly, *New Media: A Critical Introduction*, Routledge, London, 2002, p. 72.
[16] A Escobar, 'Welcome to Cyberia,' *Current Anthropology* 35,3, 1994, pp. 211-231.
[17] 'Commonsensical' as an adjective is used here in the same way as that of the social anthropological project, to refer to a widely shared set of beliefs and understandings of the social world within a given society. EE Evans-Pritchard, *Social Anthropology*, Cohen and West Ltd, London, 1962. It is radically different from a notion of the correctness of certain forms of knowledge that are held to be observable or fundamentally true. Further, 'commonsensical' is understood to be distinct to 'commonsense' in that it implies a form of equal validity in verisimilitude in a body of knowledge whilst maintaining a degree of critical difference from the position of the observer. The adoption of such a position situates the study as an analysis of particular aspects and beliefs of mainstream culture of certain societies of western culture.
[18] Welsh Assembly Government, *Online for a Better Wales*, http://www.cymruarlein.wales.gov.uk/ictimportant/ictvision.htm. 12.07.2003.
[19] Multimedia Development Corporation, *About MSC – Overview*, http://www.msc.com.my/mdc/msc/default.asp. (13.01.2003)

[20] A distinct academic field has emerged in which particular uses of or Internet technology, typically those which violate a certain moral code, are deemed pathological or addictive. See for example AS Hall & J Parsons, 'Internet Addiction: College Student Case Study Using Best Practices in Cognitive Behavior Therapy,' *Journal of Mental Health Counselling*, 23,4 October 2001, pp. 312-327.

[21] AFeenberg, *Questioning Technology*, Routledge, London, 1999,pp. 1-17; A Feenberg, *What Is Philosophy of Technology?*, 2003 http://www-rohan.sdsu.edu/faculty/feenberg/komaba.htm (viewed 25.07.03).

[22] A Feenberg, *Critical Theory of Technology*, Oxford University Press, Oxford, 1991); A Feenberg 'Heidegger, Habermas and the Essence of Technology,' paper presented at the *International Institute for Advanced Study*, Kyoto, http://www-rohan.sdsu.edu/faculty/feenberg/kyoto.html (23.05.2001).

[23] L Winner, Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought, The MIT Press, Cambridge, Massachusetts, and London, 1987.

[24] While a general predilection to technical determinist theory within Marx's work is not in dispute, Marx offers the pithy 'In acquiring new productive forces men change their mode of production, and in changing their mode of production they change their way of living – they change all their social relations. The hand mill gives you society with the feudal lord; the steam mill society with the industrial capitalist,' the details and conditions of technological development within Marx's thought remain contentious. K Marx, *The Poverty of Philosophy*, Progress Publishers, Moscow, 1955, p. 95.Elster proposes: 'Marx believed, paradoxically, both that technical change was the central fact in all world history and that it was a phenomenon uniquely characterising capitalism.' J Elster, *Explaining Marx*, Cambridge University Press, Cambridge, 1985, p. 143. The use of a technology is specifically tied up with material relations, relations that can only exist within a capitalist framework. However this seems contradictory to the central nature of 'history' which is essentially progressive. Elster contends that while such a contradiction is a problem; 'the conceptual status of social relations and of science, therefore, is somewhat ambiguous' (248), it is not insurmountable and that any theory seeking to offer an overarching theory of social change will contain contradictions and problems.

[25] A Giddens, *New Rules of Sociological Method*, Basic Books, New York, 1976.

[26] B Latour 'Mixing Humans and Nonhumans Together: The Sociology of a Door Closer', *Social Problems* 35,3, June, 1988, pp. 298-310.

[27] Emoticons, also known as 'smileys' are a means of expressing emotions and feelings in text based communication systems using a minimal number of

keystrokes. They are composed of symbols from the ASCII character set available on most English language computer keyboards and are most often representations of a face viewed by tilting one's head to the left side. Common examples include :) smiling, : (frowning, and ;) winking. Most accounts of emoticons identify SE Fahlman as the inventor of emoticons or 'smileys' who contends that they were invented on the 19th September, 1982. http://www-2.cs.cmu.edu/%7Esef/sefSmiley.htm, 31.07.03.

[28] Interestingly enough, and related to the above point about the textual nature of current communicative systems, various attempts to integrate richer forms of media into communication systems have failed. This is not just due to technological problems such as bandwidth either, see JB Walther, 'Visual Cues and Computer-Mediated Communication: Don't Look Before You Leap,' paper presented at the annual meeting of the *International Communication Association*, May, 1999, http://www.rpi.edu/walthj/ica99.html. (07.12.2000).

[29] E Hargittai. 'Open Portals or Closed Gates? Channelling Content on the World Wide Web,' *Poetics* 27,4, 2000, pp. 233-254.

[30] Daniel Chandler, 'Shaping and Being Shaped: Engagement with Media,' *CMC Magazine*, 1 February 1996, http://www.december.com/cmc/mag/1996/feb/chandler.html. (22.03.2001).

[31] N Postman, *Technopoly: The Surrender of Culture to Technology*, Vintage, New York, 1993, quoted in Chandler.

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Perichoresis and Praxis in Usenet

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Abstract
The Usenet group uk.religion.christian is a well established online community. A two year ethnographic study of the group by a long-standing member of the community, analysed and explored from the perspective of contextual theology, suggests ways that religious community may be envisioned for computer mediated environments. Several important themes have emerged, of which two are highlighted in this paper. First, the nature of the community existence of the group may be usefully conceptualised as perichoretic: that is, members of the community relate to one another by mutual interpenetration on an intellectual level. Imaginative reconstruction of a persona from text based communication, undertaken as part of the corporate life of self-identified community with a shared framework of values, results in a culture where individuals identify themselves with others by recognition, even where there is no direct interpersonal communication. Some unexpected findings of the phenomenon of lurking are especially illustrative in this regard. Second, the analysis of the religious life of the community showed forms of behaviour which could be described in terms of both faith and action (praxis). Close scrutiny of the group's communication showed that there were elements of their written communication, and concepts behind the written communication, whose effects were practical rather than just intellectual. Furthermore, these were not confined to practical outcomes, but were manifest in practical behaviours in the context. Four modes of praxis were identified. These findings are presented by drawing heavily on the group's own discussions so that the authentic voice of the community may be 'heard'. The researcher's conclusions are corroborated from the results of a comprehensive questionnaire, which included responses to open ended questions exploring the community's introspection. The insights into being a religious community in cyberspace resulting from this major, long-term study, form a base-line for future research.

Key Words: Usenet, uk.religion.Christian, interpersonal communication, community, cyberspace.

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1. Introduction

'Visions of Humanity' is not a new concept in theology. 'What is man, that thou art mindful of him?' was asked by our Jewish forefathers thousands of years ago; Psalm 8 is chanted and sung in churches throughout

Christendom even today. It is a question that has echoed again and again through the history of the church in catechisms,[1] theologies and hymns. So theologians have a head start in asking, if not in answering how humanity is envisioned, and how it ought to be envisioned. When a theologian explores the interface between cyberspace studies and theology, there is often an uncanny feeling of déjà vu.

Religion has offered a lot of possible answers to the question 'what is a human being?' as more recent versions of the text have rephrased the question. This paper will confine itself to considering Christian responses, but it should be noted that other religions and philosophies of life have engaged equally with the subject, sometimes with very different outcomes. The creation narratives of the Hebrew Scriptures say that humankind was made in the image of God. Theologians discuss endlessly exactly what this means in terms of biology and anthropology, but there is little disagreement that humanity owes its distinctiveness to being the creation of God who is unique, and uniquely creative.

My own research has been, not into individuals, but into the notion of community, and how individuals are part of community. When I first started researching community in cyberspace as an undergraduate in the mid 1990s, the main requirement was to justify the use of the word 'community' to describe the way people relate to one another in a computer mediated environment. The work since then of people like Steven Jones[2] and Nancy Baym[3] have established it as commonplace to talk about 'virtual community' so that today, there is no need to exegete Tönnies' long descriptions of *gesellschaft* and *gemeinschaft*,[4] or to consider critically the 'imagined community' of Benedict Anderson.[5] Oddly enough, the Church has been happy to accept the principle of the virtual community for centuries: we pray at every communion service 'with angels and archangels and with all the company of heaven', and you can't get a much clearer description of a virtual community than that!

Theology – the study of God, can be done in two ways. We can make statements about what God is, and explore what that tells us about what it is to be human. This is the basis of traditional systematic theology. Making definitive statements about God in this way is a risky strategy, because it is based on reading the Biblical texts as being exclusively and exhaustively truth claims. Alternatively, one can explore what being human is, and use that to tell us about the God we believe created us in his image – a phenomenological approach. This takes as its starting point people, turning traditional theology upside down, looking for pointers to what God is in humanity, rather than looking for clues to humanity in God. Ideally, theologians need to be able to look in both directions at once: to use what we know of God to inform the way we envision humankind, and to observe what humankind can teach us about God. Contextual Theology leans heavily towards this second approach, seeing

not only people, but also the context in which they are to be found, as clues to an understanding of the divine.

My research has used the methods and tools of Contextual Theology to analyse the activity of a virtual community through a two-year study and extensive survey of the Usenet group uk.religion.christian. The participant observation element produced the entire transcript of the group's discourse for the period in the form of around 100,000 archived newsgroup posts. The questionnaire, long and detailed as it was, produced a response rate of well over 60 % – perhaps close to 90% depending on how it is calculated. I shall discuss here two main findings which I think offer insight into the way that Christians, and those interested in Christianity, are seeing themselves and one another in an online community. It should be noted that some of the quotations from the group are taken from outside the period of study, but they do reflect views expressed during the two years of observation.

2. *Perichoresis*

The members of the community I was studying know one another almost exclusively through their interaction in the group. In most cases, they have never met in real life, so the way they 'know' one another is constrained by the limitations of the medium. Each person who reads messages to the group constructs an imaginative image of other individuals based on what they say and how they react to other people the reader also 'knows'. This constructed image mutates as other messages, and other interactions, influence the way the reader constructs the image.

A recorded saying of Jesus, on which much theology has been built, is found in John 15:4, when he says to the disciples 'Abide in me, as I abide in you'. Christians interpret this as Jesus incorporating humankind into the life of the Trinity of God. But quite apart from any religious connotations, this phrase describes very aptly the way that people relating to one another in virtual community have their ongoing being – their existence – not in some objective way, but in the imagination of others, and at the same time, hold the existence of others in their own imagination.

As far as one can tell, each contributor to the group remains the same person in real life. Over time, people change little by little, but remain recognisably the same person. But the experience of contributors to this computer mediated community is somewhat different. An initial impression, formed, perhaps on the basis of a single post or a series of messages posted on a specific topic or over a short period of time, may be completely changed by the discovery of significant new information. For example, one poster uses a family nickname, which is often assumed to be a male name. On several occasions, others have assumed that this person is male, and the image they have constructed of this person is of a man. On discovering that 'he' is

actually 'she', they have had to remake the image of who the poster is that they held to take into account a change in gender:

> […] until you pointed it out to me, I didn't realize you were female! Please forgive my ignorance, as in America your name isn't used (yet) for females. Apologies![6]

Similar situations have arisen where a recent graduate has been assumed to be young, when she is in fact in her forties with adult children:

> Poster A:
> I think perhaps you are taking this more personally than I had intended because you have devoted so much of your young life to this topic.
>
> Poster B:
> My *young* life?
> How old do you think I am?[7]

Other examples include where an atheist was assumed to be a Christian, and apparent confusion over the nationality of posters.

Because of the extremely wide range of approaches, views[8] and personalities represented, group members may agree with one another on one topic and argue opposing cases on another. People who disagree profoundly on one subject may unite to respond positively to a request for prayer, or in affirmative support for someone undergoing personal problems. The discovery that someone lives in the same city, or reads the same books, or gets the same results to an online personality test draws people together until a doctrinal or ethical disagreement puts them apart again.

So within the boundaries of each person's perception of the community there is a constantly shifting landscape of alliances and enmities, understandings and differences, knowledge and ignorance. The precise pattern of movement will be unique to each individual, whose perspective is based in his or her own reality, and who views the group and individuals within it from that reality.

From the point of view of theology, a model of community that adequately reflects this kind of chaotic system proved difficult. Christian models of community are, in general, based on either geographical or social proximity (the church, *ecclesia*, *koinonia*) or on notions of fellowship and common understanding ('we believe in one holy catholic church' says the Nicene-Constantinopolitan creed). Neither of these apply to the virtual community I was studying, and yet the vast majority of those who responded to the questionnaire had made it quite clear that they *were* a community of

some kind (80% replied yes to the question 'Would you describe uk.r.c as a community in some way?').

An alternative model suggested itself, from the vocabulary not of contextual theology, but of systematic theology, and was suggested by reviewing the theological context of Jesus' statement described above. A little earlier, also in the Gospel according to John, Jesus is recorded as saying 'The Father is in me, and I am in the Father' (John 10:38).[9] In the early years of the church, when academics, clergy and laity alike were groping for appropriate ways to talk about their experience of God, this statement about God, and Jesus' relationship with God, prompted people to seek to describe what God's inner existence might be like. Eusebius and others dusted down a term from ancient Greek physics: the philosopher Anaxagoras, in the fifth century BC, had used the term '*perichoresis*' to describe chaotic movement in finite space. This term, to the early church, seemed to offer a way of describing the dynamic inner life of a God who was at once One, Only, Unique Unity, and at the same time, a moving, living, shifting active relationship between Creator, Redeemer and Spirit – in a word, the doctrine of Trinity.

It should be explained that the doctrine of Trinity belongs more properly to systematic theology than to contextual theology. Although not explicitly mentioned in the Bible, the notion of God being three and also being one was developed in the very earliest church. There was – and remains – much discussion about how both the three-ness and the one-ness of God can be held together in the same idea, and for the first four centuries of the church, who was a heretic and who was a saint were often determined by how correctly the doctrine of trinity was explained. The church fathers used Greek terminology to describe aspects of the Trinity, because the main language of the early church was Greek. *Perichoresis* means literally moving or dancing around – *peri* means around, and *choreo* is the root of our word 'choreography'. The Latin fathers translated this word as '*Circumincessio*' – 'walking around', which is altogether more pedestrian!

Augustine, in *De Trinitate*, described it as 'a trinity of persons mutually interrelated, and a unity of equal essence'. The contemporary theologian Jürgen Moltmann says this of the doctrine of Trinity:

> If on the basis of salvation history and the experience of salvation, we have to recognise the unity of the Triune God in the perichoretic at-oneness of the Father, the Son and the Holy Spirit, then this does not correspond to the solitary human subject in relationship to himself […] The perichoretic at-oneness of the Triune God corresponds to the experience of the community of Christ, the community which the Spirit unites through respect, affection and love.[10]

Revisiting the activity of uk.religion.christian with this model in hand is instructive. The shifting, churning, apparently random movement of relationships in this virtual community is well described as 'chaotic movement in finite (cyber) space', after Anaxagoras. Dancing around, sometimes together, sometimes apart, but always within the community, is a most apt metaphor for the inner life of the group. At the same time, there is an appropriateness about the connotations of dynamic life in community which the Christian use of the term suggests.

Data from the questionnaire added unexpected support for the use of this model. It has long been known that some people read newsgroups but do not contribute. These people are described as 'lurkers'. Although their presence is assumed, it has been difficult to demonstrate that such people exist, and in what numbers. When the questionnaire for this project was being written, it was unreasonable optimism that led to the inclusion of 'lurker' as a self-description option for respondents. But as it turned out, 22 of the 114 respondents described themselves as lurkers, and an incidental finding from another question showed that ukrc posters lurk in considerable numbers on other groups as well.

But it was lurkers' responses to other questions that provided a surprise. Four lurkers ticked the box 'it has become part of my life', and two agreed 'it has become an important part of my life'. Several of them offered to respond by email or telephone to further questions. People who were otherwise silent and unnoticed in the community took the time and trouble to complete a long questionnaire for a community member, and were willing to follow that up if asked; and more than a quarter of them were claiming that this community was part of their life! I believe that this is strong support for a model of community that is based on subjective, dynamic relationships with envisioned others: a vision of humanity where the object is actualised in the imagination of the subject.

The idea of mutually indwelling relationships between self and others, dancing around chaotically but remaining in community, has for 1700 years been used by Christians to describe the inner life of God. Community in cyberspace reflects this profoundest concept of community that Christianity has discovered. At the risk of enraging those systematic theologians who prefer to reserve all religious language for their own use, it is entirely appropriate to liberate the term *perichoresis* into secular language for the use of those exploring new forms of community, acknowledging that Christian theology has done us all a service by preserving it as a model of community which resonates so richly with contemporary experience.

3. *Praxis*

If the notion of *perichoresis* owes everything to systematic theology, the concept of *praxis* owes more to contextual theology. The liberation

theologies of Latin America in the latter half of the last century sought to actualise Christian belief in Christian activity. For them, it was not enough to merely allow belief to inform practice: Christian living should be about 'doing' faith in every human activity. The choice of the word '*praxis*' was intended to ground this approach to faith in the language of classical theology, where orthodoxy (right belief) and orthopraxy (right action) are complementary values in Christian life.

All contextual theologies are more concerned with community practice than with details of doctrinal agreement, and liberation theologies especially privilege *praxis* above belief as the sign of authentic Christian expression. It would be odd indeed to find an exploration in contextual theology without a focus on *praxis*, and so one of the aims of this research into community online was to determine the *praxis* of the community. The obvious finding is that a text only, computer mediated community, whose mode of existence is perichoretic rather than physical is not concerned with *praxis*. This finding, though superficially true, does not do justice to the rich community life of the group, and there was a niggling suspicion that *praxis* might identifiable if it were only possible to extrapolate the concept of *praxis* into a virtual environment. The question was how to separate out text that corresponds to thought, views and beliefs from text that might correspond to action.

The breakthrough came unexpectedly. A regular poster – let's call him Mr X – posted the following message:

> On the whole, no. At the risk of offending my Catholic friends, I have observed that where the Catholic church is the majority denomination, you do find a lot more of what we Protestants would regard as superstition. Where the situation is otherwise, these things are toned down, doubtless in deference to the majority opinion.[11]

Such a post was very much contrary to the normal intercourse of the group, which usually extends respect to those from all religious traditions. Another regular poster, Mrs Y, replied:

> On Thu, 16 Dec 1999 06:52:22 BST,. <Mr X>enlightened us all with:
>
> >On the whole, no. At the risk of offending my black friends, I have
> >observed that where the black church is the majority denomination, you do
> >find a lot more of what we whites would regard as superstition. Where

> >the situation is otherwise, these things are toned down, doubtless in
> >deference to the majority opinion.
> May I please disassociate myself from <k's> bigotry.[12]

The outcry was immediate and heated. Although the majority of the group agreed that what Mr X had posted was unpleasant and showed unacceptable prejudice, Mrs Y's misrepresentation of his views to portray him as racist was intolerable. Usenet posts are normally publicly archived, and this misrepresentation would make permanent a slur on his character. Some people agreed that such a parody of his views would have been entirely acceptable if she had made clear that it were a parody by annotation or comment, but as a straight ascription to him of views he had not expressed, a great wrong had been done.

This incident showed where a line might be drawn to separate thoughts, views and opinions from 'actions'. The content of posts, the text and its meaning, were not 'action'. But making a post *in a particular way* could be construed as 'action'. With this in mind, a survey of other posts produced plenty of evidence of purposeful posting made to achieve specific effects. Once these were identified, four very clear elements of *praxis* emerged.

First, posts that are purposefully welcoming and set out to draw in those who might otherwise be seen as marginal to the community show a *praxis* of inclusion. It is a sad fact that newcomers to many Usenet groups are treated poorly by regular contributors. If a new poster asks a question that has been previously answered, or makes a comment that challenges widely held views on a group, the common response is a process known as flaming: numerous aggressive, offensive and belittling messages are posted in order to remind the newbie that he or she has no status in the group. In contrast, new posters to ukrc are generally welcomed, offered 'virtual jelly babies' and invited politely to conform to the conventions of the group if they have not already done so:[13]

> Welcome out of the lurking shadows S, join the fun, pull up a chair and have one of these jellybabies that Neil left when he went on holiday.[14]

Although many groups mention and acknowledge the presence of lurkers in their midst, few take into account the effect posts may have on lurkers. In contrast, members of uk.religion.christian may invoke the known presence of lurkers to remind people to temper their comments:

> What concerns me is the view of Christianity that a casual lurker gets when he or she reads J's posts. At least a rebuttal shows that we don't all think like that.[15]

People who have lurked and then make it known that they have done so when they post for the first time are welcomed not as newcomers, but as familiar members of the community.

Second, there is a determined culture of engaging with people as individuals. Most posters use their real names and offer identifying information which is remembered and referred by others. This produces what I have called a *praxis* of personal connection. Posters consciously and deliberately deal with one another as individuals, rather than treating the group as an interactive broadcast medium. There is also recognition that each individual has personal connections outside the group and in real life:

> BTW, I'm not […] trying to prove anything here about the RC church; your own church is also the source, for you, of your interpretation of Scripture.[16]

The third kind of *praxis* identified is a *praxis* of common purpose. Most posters value greatly the diversity that is evident in the community. People of several religions and none, and those of a wide variety of denominations within Christianity, post to the group and read it, indicating that they share a view that discussion of the Christian faith in the UK, and general discussion between UK Christians, is a purposeful way to spend leisure time. No-one is excluded from the community on the grounds of faith or lack thereof, and membership is not limited or withheld on the grounds of belief. The following response to the question 'Why do you read and/or contribute to ukrc?' is typical:

> To converse in a moderated environment with people from a wide range of traditions. All of which are considered to be of equal value.

Finally, there is a *praxis* of expression. Members of the community are committed to putting their beliefs and opinions into the public domain by expressing them in this UK-Christianity orientated community. The decision to post a message to the group is a decision to express views, thoughts or ideas in words that will be read as text by members of the group, and by anybody who choose to explore the archives kept by Google.[17]

This latter kind of *praxis* is evident in all posts to the group, and helps to support the view that there is indeed a kind of contextual theology operating

in uk.religion.christian, since it is clearly common commitment to *praxis* rather than any kind of doctrinal consensus that holds the community together.

4. Conclusions

The two themes described above are drawn from the findings of a long term, in-depth exploration of one particular community in cyberspace. First, the nature of the community existence of the group may be usefully conceptualised as *perichoretic*: that is, members of the community relate to one another by dynamic mutual interpenetration on an intellectual level. Second, the analysis of the religious life of the community showed forms of behaviour which could be described in terms of both faith and action (*praxis*). But these are not the only findings, and it should be emphasised that in any case, they form part of a much larger evaluation of a single computer mediated community. It would be misleading to suggest that their application is well established or conclusive outside one very specific context.

So I conclude by suggesting that these concepts might usefully be explored in other virtual communities, and especially in other forms of computer mediated activity and interaction. Inter-disciplinary collaboration using language and ideas derived from all areas of study may help us and future generations of cyberculture explorers to find ways to understand and communicate the experience of life online.

Notes

[1] eg. 'What is the Chief End of Man? *Westminster Shorter Catechism*, http://www.epc.org.au/wsc/wsc-1.html 4 July 2003

[2] SG Jones, ed., *Cybersociety: Computer Mediated Communication and Community*, Sage, London, 1995; *Virtual Culture*, Sage, London, 1997; *Cybersociety 2: Revisiting Computer Mediated Communication and Community*, Sage, London, 1998.

[3] NK Baym, 'The Emergence of Community in Computer-Mediated Communication,' *Cybersociety*, Sage, London, 1995, 138-163.

[4] F Tönnies, *Community and Society*, Harper and Row, London, 1957.

[5] B Anderson, *Imagined Communities* (2nd Edition), Verso, London, 1991.

[6] Message id %uXJa.8764$e26.6578@rwcrnsc52.ops.asp.att.net.

[7] Message id j6hrfvot7j50al74ofd1bra8ginb7nlra5@4ax.com.

[8] 24 denominations, including atheists and other religions, were listed in responses to a questionnaire.

[9] See also John 10:30-38, 14:20-26.

[10] J Moltmann, *The Trinity and the Kingdom of God*, SCM Press, London, 1981.

[11] Message id na.a52aaa4971.a60290diggings@argonet.co.uk. This post, and the one referred to in the next footnote, are not in the Google archive, which appears to be incomplete for the period. Also missing are a number of posts which quote the contentious material. This may be the result of a request from the misrepresented poster to Google to delete potentially libellous posts. The entire thread is preserved in my own archive. Message id 385e4a0e.1292096@bobble.good-stuff.co.uk. quotes the altered material and discusses the issues.
[12] Message id d9gh5ssded8oigv7nhjgotlmhatsjusrqj@aliantha.co.uk.
[13] Such conventions include interleaved posting rather than top-posting, adherence to the charter and respectful discussion of views that the poster may disagree with.
[14] Message id 20000615195224.10388.00003198@nso-bk.aol.com.
[15] Message id 94rev4$8um$1@nnrp1.deja.com.
[16] Message id BR7Q6.4050$lm5.675634@news6-win.server.ntlworld.com.
[17] http://groups.google.com.

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Women on the Web:
Towards a Cyberpsychology of Gender, Identity and Space in the Academic Workplace – A Feminist Critical Review

Jill Arnold & Hugh Miller

Abstract
'Narratives of the self […] serve as a critical means by which we make ourselves intelligible within the social world.'[1] Cultural life is now inextricably enmeshed with technology and over a number of years we've discussed issues and ideas about how people – including those who work in academia – conceptualise and intervene in the cyberculture of our working lives. In previous papers[2] using Goffman's presentation of self and recent social constructionist perspectives we explored how the web provides new spaces (of 'our own'?) but found that academic women were still faced with the usual 'gender trouble' of establishing a credible and authentic identity. As the academic workplace shifts its ideological, rhetorical and social structures, younger and less 'franchised' academics have found the web allows some changes in distributed power, but for most women academics their narratives and self-constructs of professional identity remain vulnerable and ambivalent about virtual representations. Here we take a critical and feminist approach to *review* our work and reflect on ongoing issues for women trying to create a relational, multi-layered and multi-functional identity. There are still many matters to be addressed about the public and private divide for the gendered body (both sides of the screen).

Key Words: Cyberpsychology, gender, academia, web home page, identity, feminist, critical.

*****

1. Introduction

> '*The web is like getting on a bicycle must have been for the freedom of movement and liberation of women.*'[3]

Our lives are interwoven with representations, images, identities and communications associated with cybertechnologies and over the last ten years the web's hypertext geographies have become part of academic [cyber]space: a place where we can share ideas, knowledge and interests relatively free from institutional structures and hierarchies. Out there in the real world 'waves' of feminism and the technologies of liberation (like the bicycle, the PC and the

washing machine) have brought (even to the shores of academia) the flotsam and jetsam of change – though also leaving many of the same old attitudes and values (challenging authority, authenticity, acceptability and credibility). So it is timely to review how we now see engagement with the web and its potential to change ways of doing/being. Gender identity and woman's place/space is of course to be understood as part of wider social and cultural contexts than an engagement with the web – so our feminist cyberpsychology is informed by the burgeoning development of critical social psychology[4] and the work of interdisciplinary [cyber] cultural studies, photography, feminist geography, media studies, anthropology, visual ethnography.[5] A conference that called for discussions of *visions of humanity* gave us impulse to look again at how our contribution to cybercultural studies might spark discussion, new stories or insights into our shared interests and professional and personal working lives. A conference in Prague also required consideration of the quality of *being there* (after all, it seems like only yesterday that we could *not* have done so) and to remember that our efforts are as nothing if we forget what it means to occupy spaces or that metamorphosis might be a waking danger. The aim of this review (re-vision) therefore is to 'take a stand' and consider practical ways to challenge inequality.

2. Identities and Freedom

> '*The metaphysics of man is the same in the private sphere as in the public one.*'[6]

The end-point of the abstract was that (particularly for women) issues concerning public/private identities remain unresolved – but it is also where the paper begins. Haraway's ideas about the possibilities for cyborg identity[7] and her feminist manifesto for using the new interface and *space* to transcend boundaries and change identities, are certainly exciting and interesting and full of possibilities, but most people live life both publicly and privately trying to resist 'the significance of technological object and processes'.[8] When Hugh Miller wrote his original papers[9] on the presentation of self in web home pages, he assumed that cyborgian activity could be seen as part of everyday life's social interaction and struggle. In our joint work we created a cyberpsychology based on both the observations of web home pages and from talking to women about their experiences of the academic web life. We generally heard about positive activities and from the UK, Europe, Australia and the USA they told us about negotiating hypertext, forming friendships and new research institutional web-wizards, tenure, on using the web for promotion *and* protection of significant programmes of senior academics, the problems of presenting and representing themselves as human, feminine,

professional (with a photo or not?) and how not to be pompous, fluffy or boring.

We expected that in these new ways and places women might effectively manage their cyber identity in spite of the dilemma of negative representations of women and the culturally dominant conceptualisations as the 'to-be-looked-at' (and wondered at as psycho-social objects). Academia has of course some of the qualities of cyberspace in its embodied and virtual forms; in its structured cultures as well as its [science] *fictions*, praxis, symbolism and text based representations and communications, stories, history etc so there were exciting possibilities for learning about both cultures.

So the *cyber*psychology we developed was about people who live *this side of the screen* and just as people wear glasses, drive cars, or use a telephone or washing machine and time shift TV with a video recorder – the *material* world is part of everyday psychology. 'Writing is pre-eminently the technology of cyborgs'[10] and making marks with a stick may well be one of the earliest human activities (possibly preceding language) – so this may not be so radical an idea – but treating *embodied* identity as encompassing the virtual goes beyond goddess or cyborg. We presumed that the new technologies had potential to evolve and create different human activities and that for example, gendered interactions in this medium could change the *meanings* of things – even the social constructs of gender itself. Our approach to understanding these matters was therefore not set out under a 'psychology of women' banner (which in the past was often like old fashioned anthropology – looking at women as 'other' and making comments from a suitable distance), but we did think that our arguments and methodologies would have positive narrative and performative value if women academics felt able to use web home pages to find others and the *means* to voice ideas. As Gilligan said: 'It is not our intention to reify women's relative inequality – but we can find ways of encouraging women to be out there.'[11]

3. Gendered Bodies

'But what are you?' 'Angels'[12]

Over the last ten years social constructionist notions that we (our selves and identities) *produce* and *are produced out of* our *social interactions* and that we both *create* gender and *are created as* gendered beings within our constructed worlds are now taken seriously and perhaps the feminist arguments of our earlier papers illustrate ideas that have been developed in critical social psychology.[13] There is no doubt that cyberspace has provided a useful context for reconsidering some long standing issues about gender and identity.

> If female identities remain in flux, then the work world is no more passive reflector of pre-existing properties of gender, but rather a central site where the category of 'woman' is contested and created. In the same light, the world of (and the worlds created by) technology need not reflect current gender categories; instead they can become another arena for the reshaping of those categories.[14]

Our bodies not only depend on context – they *are* the context. Multi-layered and multi-functional identity is as much about what we feel about ourselves as it is what we do and the roles we play. The self is an active construct from the surrounding cultural narratives – we interpret things to ourselves and our subjective experiences are generally understood only in terms of the dominant narratives and constructs that depressingly haven't changed much over ten years. Page-3 tabloid newspaper images, or sexist adverts and other sexualised representations of women in this post-modern world are no longer even considered to be an issue and power play in western consumerist culture is often dismissed in the media (even by women) saying 'hey it's Ok it's ironic!' (hah hah?). Our respondents didn't think so but *their* words remind how some challenged vulnerability:

> We are never going to change anything if we let personal appearance affect what people want to make of what I do or about my work.
> [I] eventually decided to include one [a photo] on the grounds that I didn't want to be a faceless person […] to emphasise that there was a real person behind the bits.
> I like seeking out women's pages as I'm interested in what other women were doing in my field and I like finding the photographs. I can 'relate' to the image and it makes me think it's OK to make contact – send an email, join a chat line – because there was a 'real person' out there.

A second strand to the literature of ten/fifteen years ago, focussed heavily on how 'bodies as text' could be used to game-play in a cyberspace conceptualised as virtual *theatre* and for the cyborg feminist, the metaphor appeared to allow new freedom for *shape shifting* and living with the mask of anonymity (like carnival?). It was a time when we were being persuaded by the wired media that the possibilities (for women and/or dogs as in the scurrilous 'nobody knows you're a dog on the web') through mediated interactions with the other side of the screen people would be *emancipated* (sic) and would create opportunities for 'equal' disembodied relationships. OK – but even while we accepted the usefulness of the 'as if we're on a stage'

metaphor for understanding the presentation of self and that the technologies afforded management of a multi-faceted, dynamic self (including a professional persona), the women told us that they were *not* waiting on any bit of new technology to automatically do things for them – they saw the web as just part of that same old work place – a *diaspora* for juggling domestic and professional life/identities and the ordinariness of doing too much. The web *could* be one more darned thing that had to be attended to: 'Women are more likely to prioritise how useful an activity is for themselves […] just cos it seems like something is happening doesn't mean it is!'

In other words the first thing considered by the women was what value did occupying web-space contribute to role activities and relationships? The first time round we missed the significance of '*seems like happening*' of course the women would not be fooled by 'being there' as enough in itself – they knew how much *time and energy* is required to make relationships happen and that the real value of presence was in generating contacts and web building with people of similar interests and ideas. We'll return to the gendered nature of this notion later – but first to reflect on the implications of the *geographies* of cyberspace.

4. Space and Place

> '*The big world is dangerous. Where there's no one to know one and no one to know what one likes and what one's afraid of.*'[15]

In our earliest work we focussed on how the *look* of an academic home page could be understood in the same way as the objects we carry, décor of the home we live in, the style of clothes we wear and even the things we might have round our desks at work. We 'give off' impressions and use 'acting with style' to manage the performance of self in our interactions with others. We were therefore interested in the decisions that academics had made about how their cyberspace looked. One of the main issues that arose immediately was that gendered vulnerabilities of acceptability and authenticity, played a significant part as women saw cyberspace as a *place* or a *community* not a space to be filled/occupied for individual promotion. Some did comment that as most home pages were in the context of the institutional website it was important to have a room in the big boys' techie space, but the uniform 'house style' often inhibited them – but very few men. Academic men are confident about the way they present themselves and their work – the discovery of their credentials is possible but it's not the most important presenting feature of their page. For men what they do is what they are.

We reflect again on why it is that women (unlike the men) persistently and consistently (whether consciously or not) treat the web as a

place that requires wariness and some circumspection? The significance of place or influences of the 'where-we're-from' influences on identity, seem to show that women in particular treat space as a *process* and that activity potentially makes women vulnerable. This fits with the idea of the *'between space'* or non-space – eg of airport lounges, train stations, bus stops, any queue etc as places where we need to call upon personal social skills to manage the transition from one place and being one kind of a person to another. The oblivion that some people adopt (as if in a bubble) to the presence of others rather than have to engage with them as they deal with their increasing vulnerability, is a well-known phenomenon. *Territory* can be symbolically and physically claimed, named and [addressed] as part of an understanding how we see ourselves – and of course if constructed as part of a masculine presentation of self, would be assertive confident and unchallengeable. Women treat space as some thing that operates as 'welcoming' (and there are many family websites that illustrate this phenomenon) but the academic women assumed this was to be done through the way they presented their *relationship* to their work. They presumed that some aspects of who they are depends on the *'other'* (the web visitor) to *complete.* (Mary Gergen considered the differences in autobiographies of men and women and concluded the same).[16]

'It is a sort of honour – not a building site.'[17] If there's a community of others out *there*, the web academic desk that the women unconsciously conceptualised is a space both outside and within the panopticon of the institutional ivory tower (even ones that have spires to let in the light and the dreams out[18]). This is not just another example of the justifiable cautiousness about 'exposure' (being seen) but about the difficulties women face making decisions about adopting a *'position'* and taking up space and power with respect to others; about speaking in different 'voices', associated with a difference in identity constructs. However, though portrayal and how the presented self is *looked at* and judged is important it is the narrative voice or the position/status etc that the author *speaks from* alongside the text. It is important that academic work is personalised and that the 'real person' is acceptable and visible.

Many academics know how power operates in institutional space and how being seen in the *right* places (ie paper journals) is part of having a place (a standing) in the community. We found that certainly younger (or older but still travelling hopefully) academics use the web as 'outsiders' and revel in the possibilities and power of speaking from the sidelines. When cyberspace is a meeting place the apprentice can also speak out well before being entrusted with the mysteries of the craft to *enter* the guild as masters/mistresses tenured in the institution summed up in the comment*:*

> Understanding more about how to use the web to empower women was important as it could easily be yet another way

> in which the same old gender plot carried on and women would be saying the same old lines and be directed by the same producers who had the spotlight somewhere else.

So the web cannot *automatically* be assumed to be building better academic relations but there is another factor in how the new space could be claimed and used: we consistently underestimated the extent to which higher education (and academies across the globe) were rapidly becoming dominated by ideologies of commodity in the so called knowledge 'economy' and that the language of business managerialism could so easily dominate all discussions and conceptions of the purpose of the academy. There is resistance of course but the language of business and the market place pervades. So just when we might have thought it was safe to get noticed and become 'theory girls'[19] knowledge becomes a product with only a monitory value. On the web possibly we could learn to hang out and talk – like at conferences but without the tea breaks, but it's hard not to be pessimistic – even if cyberculture *is* counter culture. The power and control of the academy like other areas of life is not easily negotiated. For women, as the discourse changes, the sexual politics of the use of these new technologies needs to be seen in a framework of institutional power and inequalities. Many younger academics certainly could exploit the opportunities of the web to voice ideas and methodologies and areas of concern but will still face old attitudes, values.

5. What's Next?

The boundaries of identification and the symbolism of 'home' in our cultural matrix are as complex on the web as they are in real life. The web may also turn out to be a place of exile or diaspora rather than a place that *informs* the narratives of people. There is the sense that some of us may not unpack our suitcases but it could help mediate the chaos of 'out there'. It's important to *know who* has produced that work or claimed something. So though we maybe nomads[20] on the web – it really doesn't matter so long as people meet and talk, connect, share good ideas, and have exciting discussions. As the prevailing ideological, rhetorical and social structures of academia are monetarist, control of the openness and possibilities of the web will remain in their wizard hands. The ideology of 'objectivity' and ideas disassociated from cultural or historical contexts also persists. We *still* think though, that the main opportunities for the web are in building cybersystems to meet, to confer and develop ideas that would not otherwise get heard or (more importantly) acted upon and for those whose work does not coincide with local current institutional ambitions and objectives, the possibility of sharing knowledge /passions and concerns with others who have common interests with disparate backgrounds is a project for all of us to pursue.

Naming is a political act and the metaphors of space have over-worked the polarities of inside /outside; the thing and the other, or any other dualistic pairing but matters are never as clear as we pretend. Our bodies remain primary to our experiences but we construct categories for our convenience (me/not me, men/women) to make some difference seem more real than they are. It's still dangerous to question essentialism but we should declare that mainstream masculinist positivism is no longer useful. As the boundaries of disciplines get fuzzy and diversity increases it's vital we assert our *legitimacy* to name what we do for ourselves and identify our own concerns. The boundaries between the private and public are of course broken every time we speak to ourselves and every time we talk to someone we *perform* our life story. The idea of the nomad is of course a myth – we all like to have a place called home – but the *idea* allows for an activity that challenges narrow taken-for-granted attitudes of universal or essentialist claims.

We use images of people to label and categorise – neatly arranged photos at the end of the corridors in the institution, or the photo on the book cover are small examples of a change from the time when initials rather than even given names were all that seemed necessary for our identification. At the same time the culture of 'psy' – our awareness and use of 'the psychological' to 'explain' things – has dominated western culture since the turn of the 20th century. But the more there is 'out there' – the more we want to explain things from 'within' and the more we want to repress the stories that tell us we are cyborg (or angelic). If we use the web to share and discuss different perspectives we *can* blur the edges. For example we don't see why when presenting our stories – that fictions, cartoons, photos, autobiography, poems, etc should be excluded. There are also people trying to find common ground, places and voices or patterns for living[21] to make things better and find solutions to problems and we agree with Tove Jansson: 'All things are so very uncertain, and that's exactly what makes me feel reassured.'[22]

Debates about gendered identity have always been central to cybercultural studies, but as our understanding on what it is to be human has moved from something tied to people's bodies towards being located in our discursive practices our studies are entering a critical post-structural phase. We now need to be more proactive in using the web to build the virtual academic community and do more dancing: 'Circle dancing is magic. It speaks to us through the millennia from the depths of human memory'[23]

Notes

[1] K Gergen & M Gergen, 'Narratives and the Self as Relationship' *Advances in Experimental Social Psychology*, 21, 1989, pp. 17-25.
[2] J Arnold & H Miller, 'Academic Masters, Mistresses and Apprentices: Gender' [Paper online] Accessed July 2003 http://www.arts.uwa.edu.au/MotsPluriels/MP1901jahm.html. H Miller & J Arnold, 'Gender and Web Home Pages' *Computers and Education* 34, 2000, pp. 335-339. H Miller & J Arnold, 'Same Old Gender Plot? Women Academics' Identities on the Web.' [Paper online] Accessed July 2003: http://ess.ntu.ac.uk/miller/cyberpsych/gendplot.htm. H Miller & J Arnold, 'Breaking Away from Grounded Identity? Women Academics on the Web,' *Cyberpsychology and Behaviour* 4,1, 2000, pp. 95-108. H Miller & J Arnold, 'Self in Web Home Page: Gender, Identity & Power in Cyberspace,' *Cyberpsychology: Mind, Cognition and Society in the Internet Age*, Guilliano Riva et al. (eds), IOS Press, Amsterdam, 2001, pp. 74 -79.
[3] This quote and all subsequent unattributed quotes are from various respondents who took part in our studies
[4] A Hepburn, *Critical Social Psychology*, Sage, London, 2003; K Gergen, *An Invitation to Social Construction*, Sage, London, 1999.
[5] J Butler, *Gender Trouble: Feminism and the Subversion of Identity*, Routledge, London, 1990; D Fox, & I Prille-ltensky, *Critical Psychology, an Introduction*, Sage, London, 1997; N Laurie, *Geographies of New Femininities*, Pearson Education Limited, Harlow, 1999.
[6] M Kundera, *The Book of Laughter and Forgetting*, Penguin Books, London, 1979.
[7] D Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature*, Sage, London, 1991.
[8] F Henwood et al., *Cyborg Lives? Women's Technobiographies*, Raw Nerve Books, New York, 2001.
[9] H Miller, 'The Presentation of Self in Electronic Life: Goffman on the Internet' (1995). Available at: http://ess.ntu.ac.uk/miller/cyberpsych/goffman.htm.
[10] D Haraway, 'A Manifesto for Cyborgs, Science, Technology and Socialist Feminism in the 1980s,' *Socialist Review* 80, 1985, pp. 65-107.
[11] C Gilligan, *In a Different Voice: Psychological Theory and Women's Development*, Harvard University Press, Cambridge, MA, 1982.
[12] P Pullman, *His Dark Materials*, Scholastic Limited, London, 2001.
[13] E Burman, *Deconstructing Feminist Psychology*, Sage, London, 1998.
[14] E Lawley, 'Computers and the Communication of Gender', 1993, (Accessed July 2003) http://www.itcs.com/elawley/gender.html.
[15] T Jansson, *Moominsummer Madness*, Penguin Books, London, 1971.

[16] M Gergen, *Feminist Reconstructions in Psychology: Narrative, Gender and Performance*, Sage, Thousand Oaks, 2001.
[17] N Papastergiadis, *Dialogues in the Diasporas*, Rivers Oram Press, London, 1998.
[18] The small windows in the towers of medieval colleges are called dream-holes.
[19] An ironic label for aspiring women academics suggested during a keynote talk by Wendy Stainton-Rogers at the recent BPS Psychology of Women Conference, University College Northampton, UK, July 2003.
[20] R Braidotti, *Embodiment and Sexual Differences in Contemporary Feminist Thought*, Columbia University Press, New York, 1994.
[21] Shaping the Networked Society: Patterns for Participation, Action & Change, 2002 A Public Sphere Project available at: http://diac.cpsr.org/cgi-bin/diac02/pattern.cgi/public.
[22] Jansson, loc. cit.
[23] Kundera, loc., cit.

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The Socializing Dimension of the Virtual Sphere in Founding a Lesbian Community

Yael Rozin

Abstract
Socialization makes us 'real women': feminine, passive, subject to male desire, wives, great moms, always secondary to men. As Simon de Beauvoir put it: you are not born a woman, you become one. *No one is brought up to be a lesbian.* This paper is based on an on-going research, emerging from participant observation of Nana's Lesbian Forum.[1] The paper explores the socializing dimension of the virtual sphere in founding a lesbian community. It focuses on the influence of lesbian women's virtual forum upon the creation of a narrative of 'Lesbian Community,' and on creating an alternative sphere in which co-culture women can participate, and be part of a collective.[2] In an attempt to understand the unique sense of 'Community' in virtual reality, and its relevance to the lesbian community in particular, this research is concerned with questions about the sort of community that is formed through and by interaction, as well as the possibility that virtual relationships form a substitute for the real life community. Other questions include the levels of influence that virtual discussion group have on the individual real world and the way virtual relationships challenge self-identity and self image. The paper offers preliminary insights into the subject.

Key Words: Socialization, lesbianism, sexual tendencies, heterosexual, community.

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When '*Lesbianism*' is concerned, sexual tendency is usually understood as the most important characteristic that molds the individual identity and her relationships with the others. But as the sexual tendency is invisible (lesbian as well as heterosexual) it is the way the mainstream society constructs the sexual tendency that matter. In her article 'Making Her (in)Visible'[3] Ciasullo describe the way the popular media of the 90s made 'lesbianism' visible; the representation of the lesbian woman made possible by straightening through heterosexual norms before she could step out of the closet and be seen in the public sphere of mainstream culture. Being excluded from the public sphere, the lesbians' community had no part in one of the fundamental issues discussed in socio-anthropological researches: the discussion that emphasizes the essential connection between the geography dimension and the socio-cultural dimension.

Researchers mourn the 'End of Geography,'[4] referring to the way the public sphere has vanished and the human community detached from a defined place. But the lesbian community members had never needed to cut off from the city square – they were never there.

The fresh view offered by Anderson in his book *Imagined Communities*,[5] allows us some kind of comfort. Anderson describes the 'Community' as a creature/product of imagination. It is not geography that formulates communities but conceptions, elements of community and shared culture. The 'Virtual Community' is made of the way people comprehend themselves as a group.

Seeking the parallel of the geography dimension on the web, a study conducted in the US by Correll claims that: 'The LC's (Lesbian Community) primary function is to serve as a lesbian community for people lacking a community in their geographic areas.'[6] So are women who debate their lesbian identity and do not feel comfortable participating in real-life gatherings with other lesbians and the lesbian co-culture.

Lack of a real life community is certainly not the primary reason for the existence of a virtual lesbian community in Israel. Israel is a small country and there is no problem to reach a suitable gathering place. On top of that, most of the women participating in the forum live openly 'outside the closet' – at least among the lesbian community – and being a part of the virtual community is integrated into their 'real' live activities.

What then is the incentive for lesbian women in Israel to be part of a virtual community?

The participants' messages express their perception of the virtual forum as a home, a tribe, and a secret place, a shelter and a public lesbian sphere facing an alienated world. As one of the participants wrote: '[…] I wish we lived in a world where there was no need to hide behind a nick just to say you are a lesbian.'

The lesbian community, which is not characterized by geographic domain in reality, is strict about modeling a well-defined and substantial sphere. Lofty virtual walls delimit the place, distinguish it from the outside and characterize it within. It provides the community with a sense of 'togetherness' and a safe place *to be* a Lesbian.[7] 'G' writes:

> [the forum is a] place where a public lesbian discussion can take place. To sound a voice which is excluded in reality. A virtual sphere like that is a unique place, where this voice, hesitant and stuttered, can become articulate.

Varied strategies are used to define the virtual territory; the borderlines are worded in the forum's regulations and on the virtual walls hang signs prohibiting men's active attendance. Their intrusive messages are

stricken by the SySop[8] and a notice is posted instead, clarifying the reason. The Sysop's message is a reflection and reinforcement of the delicate but explicit borderlines symbolizing the place as a 'Lesbian Sphere'. The participating women practice this essential principle as well. By severely responding to the writer's message or by informing the SySop and demanding a reaction.

These strict rules are applied as well, towards other '*Others*', who do not respect the lesbian way of life and are perceived as a threat to the domain. Among them are non-lesbian women and minorities within the Homo'-Les'-Bi'-Trans' community. They will also encounter an exclusionary response.

In her essay 'Compulsory Heterosexuality and Lesbian Existence' Adrienne Rich[9] introduces us to the concept of the sexual tendency as a matter concealed from us. Furthermore, she writes, from the heterosexual point of view, the lesbian experience stands on a scale between perversion to total invisibility. 'A' writes:

> Yesterday I went by myself to the cinema. I sat at the back looking around at all those people filling the place. I wanted so much to observe a same-sex couple … if 10% of the population are homosexual, then there must have been some of them there! And I have seen none.

Lack of visibility causes difficulty in making an unmediated contact with other lesbian women. As a result, the lesbian woman must be assisted with the public discourse to mold her identity. But the image of the lesbian woman, as emerges from the varied images of 'lesbianism' and particularly through socializing structures, is a negative one.[10]

The absence of role models and the negative public images reflecting on the lesbian self-identity increases the importance of non-mediated encounter with other lesbian women.[11] This kind of contact, possible in the virtual sphere imbues significance to their personal experience and provides tools for coping in the world surrounding them. 'B' writes:

> This forum is very interesting […] After realizing that it's O.K not to be like anybody else and that it's not so bad not to be like anybody else, and after reaching the point of not careing whether I'm like anybody else or not, I found you and I feel exactly like anybody else.

The participants' massages weave the story of their inner world as well as the community narrative. Thus, it creates a common formation of understanding the lesbian individual identity and the co-culture's construction. The participants' personal stories become a public estate. The stories form a

'folklore' that contributes to the reinforcement of the common narrative. A tribal flame is fed by these stories.

However, the tribe's component does not contradict individualism. Certain participants obtain a unique status and become a 'DyKon.'[12] The DyKons fulfill the social role of a mentor and of a popular psychologist who mediate between their former personal and collective lesbian experience and the inexperienced lesbian. In short, they act as socialization agents of the lesbian co-culture.

These women are usually in their mid-thirties, self-confident, comfortable with their lesbian identity and sexuality. Out of the closet for a long time and with strong feelings of belonging/devotion/loyalty to the lesbian community.

The DyKons' messages are challenging. In an open manner they raise and enable discussions on 'forbidden' subjects, thus, easing the mental and cognitive burden that is associated with establishing lesbian identity in heterosexual society.

In July 2001 *Hurricane* began to publish *The Guide for the Beginning Lesbian*. Its chapters bear titles as: 'Why Me' and 'Where Do All the Rest Hide?' The guide is very informative and contains historical descriptions of '*Lesbianism*', terminology, symbols, and links to other sites. (Recently I was told that the Israel Association of Gay-Lesbian-Bi and Tran's would hold lectures based on the guide).

Another example is: 'The Weekly Sex Column of Sister D'. Her detailed messages are written in amusing language, informative and accurate, combined with personal anecdotes and frequently cause the reader to blush …(I for sure).

The other participants respond with stories of their own and with proposals of subjects for future columns they wish to read.

In the year 2002 the following graffiti appeared on walls all over the country:

Lesbian – the keyboard is liberating!
Signed – NANA's lesbian forum
March 2002

These words are the best summary for this paper. They articulate the experience of women living in the '*Borderlands*',[13] continuously trying to bridge the common heterosexual norms and the lesbian community ones. It expresses the understanding that being a part of the virtual lesbian community offers a common ground for comprehending the individual self-conception as a lesbian, as well as their need to be a part of community.

It is their way of putting the politics back into 'Lesbianism'.

Notes

[1] 'Nana' is a commercial, mainstream site. The lesbian forum conducted within it is the most active and popular forum amongst other Israeli's lesbian forums.
[2] The word co-culture is used to avoid the negative or inferior connotations of past descriptions (subculture, minority etc.).
[3] MA Ciasullo, 'Making Her (in)Visible: Culture Representations of Lesbianism and the Lesbian Body in the 1990s,' *Feminist Studies* 27,3, 2001, pp. 577-608.
[4] Z Bauman, *Globalization: The Human Consequences*, Hakibbutz Hameuchad, Israel, 2002.
[5] B Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, Verso Books, rev. ed., 1991.
[6] S Correll, 'The Ethnography of an Electronic Bar; the Lesbian Café,' *Journal of Contemporary Ethnography* 24,3, 1995, p. 282.
[7] S Krieger, 'Lesbian Identity and Community: Recent Social Science Literature,' *Sings: Journal of Women in Culture and Society* 8, 1982, pp. 91-108. A Warren & B Carol, *Identity and Community in the Gay World*, John Wiley & Sons Inc., NY, 1974.
[8] SySop = Systems operator
[9] A Rich, 'Compulsory Heterosexuality and Lesbian Existence,'[*Signs* 5 (1980)] reprinted in *The Lesbian and Gay Studies Reader*, Abelove et al. (eds), Routledge, New York, 1993,pp. 227-254.
[10] Ciasullo, op. cit., 577.
[11] B Ponse, *Identities in the Lesbian World, the Social Construction of Self* (Contributions in Sociology; no. 28, Greenwood Press, Inc., USA, 1978.
[12] DyKcon= dyke+ icon. One of the participant linguistic renewal.
[13] G Anzaldua, *Borderlands/La Frontera: The New Mestiza*, Spinsters/Aunt Lute, San Francisco, 1987.

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Pro-Ana: Peer Groups in Cyberspace

Irene Dunn

Abstract
Peer groups have been well established as important sites for identity development during adolescence. However, much of the literature on adolescent peer groups takes for granted physical presence. Similarly, classical ethnographic research, including research conducted in school settings, makes assumptions about the simultaneous physical presence of researcher and the researched. Being there has traditionally been viewed as a central aspect of ethnographic research. Generally it is the notion of the physical presence of the researcher in the research setting over an extended period of time which distinguishes ethnographic research from other forms of quantitative and indeed, qualitative research. Many researchers have demonstrated the effectiveness of ethnographic research methods for exploring the development of the individual within peer group settings during adolescence. However the rise in popularity of the Internet with its opportunities for disembodied interactions, challenges the way peer groups are theorised, forces reconsideration of what constitutes a peer group, and raises questions about meaningful ways of researching peer groups in cyberspace.

Key Words: Cyberspace, peer groups, communities, pro-ana, group behaviour.

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Whilst ethnographic research is steadily gaining recognition as a meaningful way of researching communities in cyberspace, research into adolescent peer groups in cyberspace as specific types of communities is virtually non-existent. Meaningful research into the role and function of adolescent peer groups in cyberspace that are pro-anorexia is even rarer. The number of pro-ana sites in cyberspace is growing rapidly, as is negativity generated by the mass media about the dangers that these sites present, making it crucial to explore the importance of pro-ana sites to the girls who use and create them. Pro-ana sites provide unique opportunities for researching the form and function of peer groups in cyberspace and their role in the development of identity, specifically an anorexic identity. They also raise questions about how group behaviour and ideals of femininity are defined and regulated in an environment of disembodied interaction despite the fact that anorexia is preoccupied with the body.

Cyberspace provides unique opportunities for disembodied interaction with others who are unknown, may never be known and potentially live on the other side of the world. This anonymity is particularly useful on pro-ana sites as they allow individuals to develop, maintain and admit that they have an eating disorder, confident that they will not be expected to get better. Moreover, cyberspace enables identity performance[1] as there are limited opportunities for the body to contradict the word. This means that countless identities can be created and adopted, for the sake of experimenting, or in order to deceive others. Internet identities then are problematic, as they may not reflect the 'authentic persona' and appearance of people.[2] The absence of the body and other visual cues in cyberspace means that identity is derived almost entirely from what one has written, providing a space for invention and the development of multiple identities. However, on pro-ana sites establishing whether or not individuals truly are anorexic is not as significant as the interactions that take place on these sites, even if they come from imagined bodies. Although cyberspace provides opportunities to inhabit a body-less space and develop identities free of gender and race, this offer is generally not taken up. New identities are explored, created and adopted in cyberspace but are expressed conventionally[3] in terms of gender and race, making individuals in a disembodied environment, re-embodied through the written word.

In this context, claims about the internet 'detaching self-expression from the politics of the body'[4] seem unjustified since through the text, individuals are tying themselves down to gendered bodies again, even if they are invented. This fluidity of the 'virtual body' potentially enables individuals to adapt and comply with 'the nature, structure and aims of any individual online community',[5] thus gaining acceptance from that community. The opportunity to construct and re-construct identities that comply with a multitude of groups in cyberspace would be particularly useful to some adolescents who may have exhausted opportunities for friendship at school. To them the internet represents a fresh start, and a possible solution to feelings of isolation and loneliness associated with rejection from the peer group.

Use of the term community to describe some aspects of cyberspace is reasonable since 'central to the notion of community is interaction amongst its membership'.[6] Coates suggests that internet communities are a source of 'meaningful togetherness',[7] a remedy for the loneliness of the 'contemporary individual in Western society'.[8] Lindlof and Shatzer concur that, since much of cyberspace involves continuous dialogue amongst individuals requiring 'a measure of unselfish effort to sustain […] the use of a community concept to indicate this social form seems fitting'.[9] If communities exist in cyberspace, providing among other things, a sense of belonging, and facilitating the gathering of people with similar interests in a virtual space, it is no great leap

to think about the existence of peer groups as specific and new types of adolescent communities in cyberspace.

Theories about and studies into peer groups as influential adolescent communities assume the physical presence of members, as peer groups move into the domain of cyberspace, some aspects of these theories remain relevant and help justify the continued use of this term. Websites such as gURL.com for example, can be defined as peer groups as they are places where, through dialogue, girls share thoughts and advice centred around the common experience of being female and adolescent.

Although there has been very little research conducted into adolescent peer groups in cyberspace, the important role played by adolescent peer groups generally is well established. Peer groups play an important role in identity development, they tend to have codes of behaviour and standards relating to a range of things including fashion, values and attitudes. Not conforming to these standards could result in exclusion from the group, in some cases this is how pressure is exerted upon peers to regulate their behaviour in accordance with other members of the group. Peer groups also socialise individuals, helping them to interact with others and learn group values, which may or may not be compatible with those of parents. Therefore peer groups are an important and influential site of identity development, serving as a point of contact and socialisation, that enables adolescents to branch out beyond the family into the wider world.

It is important to acknowledge that peer groups can be fluid. Particularly within school settings, individuals may move between groups or belong to more than one group, doing so enables experimentation with a variety of behaviours, which is an important part of identity development.[10] If adolescence is viewed as a period of experimentation and identity formation, then cyberspace with its fluidity and limitless potential for trying out new identities in a body-less, anonymous space is a medium ideally suited to adolescence. Indeed the rise in popularity of cyberspace has led to predictions that 'future cohorts of students will find that traditional socialising agencies such as family, school and church will be supplemented or even overshadowed by on-line computer-based environments'.[11] If 'the emergence of the Internet forces us to reconsider the relationship between identity and the body',[12] then the Internet also forces reconsideration of the relationship between embodiment and peer groups, or the impact that not being there has on their form and function. Particularly in relation to identity development.

If all peer group research conducted to date takes for granted the simultaneous physical presence of members, and argues the importance of the peer group for identity development during adolescence, then it is important to develop new theories about adolescent peer groups which can incorporate body-less peer groups. This can only be done through research. As much attention needs to be devoted to cyberspace peer groups as has been

devoted to more conventional peer groups in the past. Pro-anorexia, or pro-ana sites are just one type of adolescent peer group in cyberspace in need of meaningful research which is not reliant upon sensationalised, rudimentary observations such as those articulated in the mass media.[13] This is not to suggest that all anorexics are homogeneous, rather that despite individual differences, the common interest shared by people who create and visit these sites is anorexia, although this understates the complexity of these sites. As the name implies, pro-ana websites are usually created by and for girls who are in favour of anorexia, they are sites that are supportive of non-recovery and seek to legitimise anorexia and other eating disorders.

There are hundreds of pro-ana groups in cyberspace, and it is useful to make some generalisations about their form and function in order to explore those aspects which align them with more conventional adolescent peer groups such as those found in schools and, to examine how they differ. One of the most immediately obvious similarities is that like ordinary peer groups, pro-ana sites, despite existing in a disembodied environment, are places where, through dialogue and visuals, ideals of femininity are negotiated and established, primarily in relation to the body. In addition, the opportunity to create a perfect body is not taken up on pro-ana sites. Identity continues to be derived from the imperfect body, this is unsurprising, as the centrality of the body to femininity has long been established in the literature. Haug discusses the construction of women's identity around the body and alludes to the dangers this presents, 'as far as women are concerned, their intimate relationship with their bodies – their struggle to conform to conventional standards of beauty, for example – has been and still remains self-destructive'.[14]

On pro-ana sites ideals of beauty and body are expressed not only through dialogue but also through pictures, referred to as *thinspiration* which are intended to inspire girls to persevere with anorexia. These pictures, sometimes of models and celebrities, but always of very thin women whose bones are often visible under their skin, are a feature of the majority of pro-ana sites. It is beyond coincidence that many of these pictures would be familiar to anyone with an interest in popular culture since they are often the same images that appear in other arenas such as magazines and television. Whilst avoiding engagement in the long running debate over the extent to which the media, (and add to this pro-ana sites) cause eating disorders[15] it is important to be aware that there is some agreement amongst peer groups and pro-ana peer groups online about ideal femininity and that these similarities can be linked to the impact and pervasiveness of images in the media. More important than the presence of these images is the way they are used to justify and legitimise eating disorders, making explicit links with celebrities glamourises anorexia, depicting it as a virtuous undertaking, a fashion statement, removing it from the realm of disorder.

Similarly, tabloid magazine specials on celebrities with eating disorders glamorises the disorder, characterising it as a celebrity accessory that, unlike plastic surgery can be emulated relatively easily and inexpensively although at great personal cost. A secondary effect of the media focus on celebrities with anorexia is that it provides role models worthy of inclusion on pro-ana sites for admiration. Other visual devices used on pro-ana sites to regulate behaviour, and justify the eating disorder, includes the use of pictures of overweight women as an example of what not to become. These pictures represent a dangerous version of femininity that is feared and must be avoided at all costs.

Apart from the term thinspiration, pro-ana sites, like peer groups generally, contain other examples of colloquial language. For example the term 'haters' or 'bashers' is used to describe people who visit pro-ana sites and express their criticism and disapproval, often in very aggressive language. Other examples include 'ana' to refer to anorexia, and 'mia' which indicates bulimia, these names serve to personify the eating disorder, and some sites refer to ana as a friend or demand that she be worshipped. Some sites feature letters written to and from ana for visitors to read, the main purpose of this is to characterise ana not only as a person but as a familiar friend who deserves loyalty. Many sites feature pseudo-religious elements, it is not unusual to find ana psalms, ana beliefs, an ana creed and the thin commandments many of which are borrowed from Christianity and emphasise the role of self-discipline to anorexia. The inclusion of pseudo-religious elements makes eating disorders appear similar to a covenant, not between individuals and their god but between individuals and ana, doing so disregards the broader socio-cultural factors involved in eating disorders in the same way that psychiatric/medical approaches tend to.

It is not surprising that pro-ana sites, like medical approaches, disregard the socio-cultural factors associated with eating disorders considering the dominance of medicine with its emphasis upon treating the individual, is what most girls with anorexia who use and create pro-ana sites have been exposed to. This is demonstrated in the way in which, on pro-ana sites there is little if any consideration of societal pressure placed upon women to be thin. Similarly all pro-ana sites have an introductory paragraph, a disclaimer, written by the site creator, some more inviting than others, but their purpose is to greet and/or warn site visitors about the content of the site, particularly that it may contain triggering pictures and information. The strongest message emerging from the introductory paragraph on pro-ana sites, is one of diminished responsibility. Whether out of a desire to avoid litigation, or simply as a reflection of the medical approaches they have been exposed, which blames the individual, rather than seeing society as part of the problem, each site creator stresses that they accept no responsibility for individuals who enter their site.

Pro-ana sites assert beliefs about individualism, that is, people entering pro-ana sites, do so as individuals. But in the sense that people gather on pro-ana sites to exchange dialogue and share interests, it is more fitting to consider these people to be part of a community. These interactions primarily occur on the guest books and forums where individuals can post advice and opinions on specific topics. Similarly adolescent peer groups are comprised of individuals who form part of a community with common interests and values, they may also be a source of support particularly when adolescents are in conflict with parents.[16] Support from peers is also vital on pro-ana sites since, the decision to be pro-ana tends to alienate adolescents from their parents as, through the site/s, they begin to be socialised in unique ways. One example of this is the way pro-ana sites reinforce deceptive behaviours. All sites feature tips and tricks which can be used to help anorexics disguise the fact that they are not eating, in addition, pro-ana sites contain tips about; fasting, exercise, pills, and foods that are considered safe eat.

Some sites feature a buddy system, individuals are matched with somebody to exchange emails with in order to maintain motivation. Individuals can also also participate in weight loss scale downs. This involves individuals setting themselves a target weight to reach within a set period of time and posting regular updates of their progress is designed to motivate themselves and others. Again this support may directly conflict with the support offered by family and health professionals and needs to be recognised as poorly disguised competitiveness which is potentially harmful as it encourages the pursuit of unrealistic and unhealthy body weights.

Pro-ana sites like adolescent peer groups generally, have external forces imposed upon them. In school peer groups, control is exerted over adolescents by teachers, parents and other aspects of formal school life. In cyberspace different forces are exerted upon pro-ana groups. Although parents can theoretically control children's engagement with the internet, this can be difficult to monitor, this is part of the appeal of pro-ana sites to individuals as it allows them to covertly develop and maintain an anorexic identity, and gain the support of others whilst doing so. However, regulating the internet and enforcing these regulations presents many difficulties, not least because cyberspace spans many nations. One approach to pro-ana sites taken by yahoo, in response to pressures exerted in the mass media, has been to shut down some sites on the grounds that they have breached the conditions of the service agreement. However, opportunities to move about anonymously, creating new identities and new beginnings in cyberspace, has meant that sites that are shut down often reappear elsewhere in cyberspace. Whilst this is problematic for parents, eating disorder associations, and others concerned about the influence of pro-ana sites, it is demonstrative of the

resilience of these sites, and their importance to those who use and create them.

The presence of pro-ana groups in cyberspace is significant from two perspectives. They necessitate changes in perceptions about what constitutes a peer group, and challenge the importance of physical presence to their form and function. Secondly pro-ana sites highlight an interesting contradiction, anorexia is characterised by a preoccupation with the body yet opportunities for re-creation of the perfect body afforded by cyberspace are rejected. On pro-ana sites, the absence of the body places even greater emphasis upon it, identity is derived almost entirely from the body, the body becomes paramount.

Notes

[1] TR Lindlof & MJ Shatzer, 'Media Ethnography in Virtual Space: Strategies, Limits and Possibilities,' *Journal of Broadcasting and Electronic Media* 42,2, 1998, p. 5.
[2] G Ward, 'Crossing Cyber Boundaries: Where Is the Body Located in the Online Community?' *Reframing the Body*, Palgrave MacMillan, London, 2002, p. 202.
[3] A Balsamo, *Technologies of the Gendered Body: Reading Cyborg Women*, Duke University Press, Durham, 1996, p. 131.
[4] Lindlof et al.,loc. cit.
[5] Ward, op. cit., p. 191.
[6] M Davis, 'Fragmented by Technologies: A Community in Cyberspace,' *Interpersonal Computing and Technology: An Electronic Journal for the 21st Century* 5, 1997, p. 3.
[7] G Coates, 'Disembodied Cyber Co-Presence: The Art of Being There While Somewhere Else,' *Reframing the Body*, Palgrave MacMillan, London, 2002, p. 209.
[8] Ibid.
[9] Lindlof et al, 3.
[10] PC Heaven, *Contemporary Adolescence: A Social Psychological Approach*, Macmillan, Melbourne, 1994, p. 79.
[11] G Russell & N Russell, 'Cyberspace and School Education,' *Westminster Studies in Education*, 22, 1999, pp. 1-7.
[12] Coates, op. cit., p. 211.
[13] For example Dr Phil aired two episodes on eating disorders and pro-ana sites in 2003.
[14] F Haug, *Female Sexualisation: A Collective Work of Memory*, Verso, London, 1983, p. 263.
[15] See for example Harrison, 1997.

[16] Heaven, loc. cit.

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The Future is Now: 9/11, CCTV and Our Brave New World

Ursula Drees & Martin Bayer

Abstract
Movies such as *1984*, *The Truman Show*, *Starship Troopers*, or *Minority Report* are regarded as imaginations of the impossible and unthinkable. Mankind defines itself as an individualised, authentic civilisation, whose independence and freedom is steadily increasing. We will nevertheless argue that these movies describe possible future scenarios and models of life under constant and unrestricted surveillance. The result will be a uniform and standardised civilisation. Marketing will surely embrace the 'personalised advertisement' as shown in *Minority Report*, where the customer's eyes are scanned, his identity is recognized, and his habits are loaded from a database. Today, many companies save their customers' data, some with, some without the consent or even the knowledge of the latter. The number of the already ubiquitous CCTV cameras is increasing steadily. Especially since 9/11 and the constant fear of terrorist attacks, 'changes' to individual liberty have increased tremendously. Iris scanners and face recognition technologies are widely introduced to public environments. Still, surveillance in all its forms allegedly only provides for better security and personalised content; but we should hope that the governments and companies using these techniques will continue doing so for our good only – otherwise, *1984* will easily become a pale imitation of reality.

Key Words: Identification, CCTV, cyberspace, standardisation, surveillance, virtuality, individuality, identity, authenticity, vulnerability.

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1. Customer Satisfaction and Surveillance in a Post-9/11 Environment

Movies such as *1984*, *The Truman Show*, *Starship Troopers*, or *Minority Report* are regarded as imaginations of the impossible and unthinkable. The future they depict seems too bleak (if not absurd) for many to accept. Mankind defines itself as an individualised, authentic civilisation, whose independence and freedom is steadily increasing. We will nevertheless argue that these movies describe possible future scenarios and models of life under constant and unrestricted surveillance. The result will be a uniform and standardised civilisation. Several actual developments will be combined to make this future outlook too soon a reality. Thus, *1984*'s 'Big Brother' may easily become a pale imitation of reality.

In *Minority Report*, everybody's irises are constantly scanned, one's identity is recognized and a connection to a database is made. Thus, wherever you walk, you receive special offers, according to your previous buys, your size, and your likings. Furthermore, individual traffic is heavily controlled: not only are speed and destination to be pre-set, the authorities can gain full control over one's car. The combination of biometrically based surveillance and interconnected databases provides for instant location of any individual.

This brave new world, however, is far from being a mere futuristic outlook. Millions of customers are happily willing to provide even intimate data to supermarkets and retailers. Overall, 85% of British households have provided data to at least one of the such so-called 'customer loyalty schemes.' Huge amounts of personal information is now in the hands of private companies. The drugstore chain Boots has a database of 15 million card holders, and the loyalty scheme *Nectar* claims to have one of the largest email files in the UK. In the US, loyalty card details have already been used in family law cases; for example, a man's card-tracked purchase of expensive wine was used as evidence in a divorce case to show that he could afford to pay more alimony. Ethnic profiling is another possibility: according to Katherine Albrecht from *Consumers Against Supermarket Privacy Invasion and Numbering*, the FBI reviewed the loyalty card records of the terrorists involved in the 9/11 attacks to create a profile of ethnic tastes and supermarket shopping patterns associated with terrorism.[1]

Radio Frequency Identification – or RFID – is now being introduced, a form of wireless electronic tagging which can be embedded into any product. According to this technology's pioneers, the Auto-ID Centre, the ultimate goal is to assign a unique number to every product on the planet, leading to a 'physically linked world'. Everyone in the possession of such a scanning device could see what you have bought, what you are using at home, and ultimately, who you are. This technology is not only a supply chain management tool, but it is already used for combating crime: in one *Tesco* store in Cambridge, RFID tags trigger a digital camera to take a picture of every customer who takes *Gillette Mach 3* razorblades, an article that is regularly stolen. More and more public places are constantly monitored by CCTV cameras, which have been set up by local authorities, but increasingly by private companies, too. In London, any customer will soon be filmed for the whole time he uses public transport. The *Congestion Charge* in London, a fee to enter the city centre by car, is automatically controlled by CCTV cameras. Thus, and without public dissent, the authorities can track whose car has entered and left the city at any given time. The next step would be to enforce 'correct traffic behaviour', as wireless identification devices in conjunction with the cars' electronics could prevent motorists from speeding or other unruly behaviour.

People can be automatically identified by various means, for example by their face or parts of it, their irises, their retinas, or the many other individual parts of our bodies, such as fingerprints, ears, the voice, the hands' geometry, or by the way one walks. Depending on the means, all these techniques have a certain element of uncertainty, even if one does not assume that somebody wants to hide his true identity.

Since the terror attacks of 9/11, two aspects of surveillance, data storage, and data processing have changed: both the willingness of governments to use such techniques, and the willingness of the people to accept constant surveillance have rapidly increased. In the same time, due to the revolution in information technology, there are many more ways to identify, tag, and track individuals and their behaviour. The necessity to use these techniques has been recognized and is being propagated, but not as a means of surveillance, but for protecting the people by combating crime and especially terrorism.

Examples are many and diverse. EU leaders agreed to include a chip with biometrical data such as eye scans in the forthcoming passport versions. US immigration offices ask for fingerprints of foreigners from specific countries. The UK is now discussing the introduction of identity cards with biometrical data, while there was always a strong opposition against any ID cards at all. The British Home Office is deploying facial recognition systems to fight fraudulent asylum applications. In numerous airports, museums, and shopping malls, biometrical identification is already used to spot individuals or to scan for unusual behaviour.

Telecommunication provider save their customers' data and provide the authorities with far-reaching access to both this data and live communication, while the *Echelon* programme is already scanning private emails and phone calls. More and more databases and networks are linked together. Personal data is increasingly acquired by private companies, also by the outsourcing of public services, for example the possible privatisation of the British Forensic Science Service, including the DNA crime database.

Although the US Senate blocked the *Total Information Awareness Program*, intended to be a global data-surveillance system to find signs of immediate threats, there are numerous programmes leading in the same direction. The Pentagon's *Defense Advanced Research Projects Agency* (DARPA) – once the driving force behind the development of the Internet – is also developing a system called *Combat Zones That See*, linking identification systems with surveillance cameras to monitor a whole city, with advanced data mining being the very heart of this system of systems. Florida recently introduced the aptly-called MATrIx, short for *Multistate Anti-Terrorism Information Exchange*. With this tool, it is possible to 'let authorities, for instance, instantly find the name and address of every brown-haired owner of a red Ford pickup truck in a 20-mile radius of a suspicious

event'. According to James Moore (former Commissioner of the Florida Department of Law Enforcement), 'the power of this technology – to take seemingly isolated bits of data and tie them together to get a clear picture in seconds – is vital to strengthening our domestic security.'

The 'War against Terror' seems to be an endless struggle against an amorphous enemy who – to quote Clausewitz – changes its shape like a chameleon. We still cannot foresee what restrictions in our privacy we are ready to take, nor which restrictions will be imposed. Hannah Arendt wrote in *The Origins of Totalitarism*: 'The principle of the movement is whoever is not included is excluded, whoever is not with me is against me, so the world loses all the nuances and pluralistic aspects that have become too confusing for the masses.'[2] So, are you with us, or with the terrorists?

2. Visions of Humanity: The Expulsion from Paradise

Why do we accept these new levels of constant and unrestricted surveillance?

> First reason. The relationship between nature and technology in today's society has profoundly changed.
>
> Second reason. An increased standardization and conformity of humankind within society, due to a pronounced wish for acceptance.
>
> Third reason: Creation of a second self by means of Virtual Reality
>
> First reason. The relationship between nature and technology in today's society has profoundly changed.

'The expulsion from Paradise is not a loss; man creates a new, more blissful paradise' through his 'art'. (George Agricola and Paracelsus)

Nature as such exists and reproduces itself. Mankind, however, only exists due to its constant action, reproduction, and reinvention. Nature is thus acting in a paradoxical way, being spontaneous and expedient at the same time.

Modern man, however, has entirely lost his connection with nature. In principle, nature can be manufactured and reproduced by man.

For us dealing with nature means to change and improve it, making it fit our ideals. Most people not only assume that every natural product can be technically reproduced, but also that all natural processes will be simulated and replaced soon, including ourselves.

The following objectives of human progress may be derived from technological progress:

1. Increased striving for autonomy from nature.
2. Gaining more available time.
3. Increase in knowledge and abilities.
4. Decrease in work-load and improvements in the quality of life.

To summarise: man masters nature through technology. He gains freedom and independence, but at the same time loses knowledge and a natural way of relating to life.

This leads to the second reason. An increased standardization and conformity of humankind within society, due to a pronounced wish for acceptance.

Harold Innis states:

> The exploitation of a particular communication technology fixes particular sensory ratios in members of society. By fixing such a relation it determines a society's world view; that is, it stipulates a characteristic way of organizing experience. It thus determines the forms of knowledge, the structure of perception, and the sensory equipment attuned to absorb reality.[3]

For man's social existence, rules are necessary.

They determine the manners of dealing with one another, create laws and thus also a society's morals and ethics. Without them, the highly complex Western societies would collapse. Yet where new rules and laws are effective, new norms come about that are meant to show man the right way.

Contrary to rules and laws, which tell people how not to act, norms illustrate what society regards as normal. Therefore they don't describe a way that contains what is right for every individual, but rather constitute the mean of the sum of all individual desires.

A life of anonymity, of a systematised norm, makes people feel safe and protected. It allows each individual to strive towards the standardised ideal.

Thus in the area of genetic engineering during the past few years, the use of computers has led to a progress that makes it possible to significantly manipulate a person's genes. They enhance, e.g.:

1. control of the ageing process, of muscle growth or growth in general;

2. control of one's appearances through plastic surgery;
3. increase of mental capacities through chip implants;
4. the ability to combat diseases and epidemics.

These examples perfectly express the struggle towards an ideal norm and the desire for man's ultimate rule over human finiteness.

We have an identity in the physical-natural world but need an additional identity for the world determined by technology.

Which leads us to the third reason: Creation of a second self by means of Virtual Reality

In his book *Connected Intelligence: The Arrival of the Web Society* the media philosopher Derrick de Kerckhove says: 'One of the main effects of digitisation is to make 'liquid' everything that is solid. Anything that can be digitised can be translated into anything else that can be digitised.'[4]

We can distinguish three levels of virtuality:

(1) virtuality as an instrument for simulation
(2) virtuality as a prosthesis
(3) virtuality as a surrogate world

The first level: virtuality as an instrument for simulation Currently virtual reality still largely serves to simulate genuine realities; it is used, e.g., for driving simulation, computer games or for medical applications. Virtual reality as an eye, as an instrument for visualisation such as: virtual interior furnishings, virtual buildings and constructions, flight simulators, computer simulation of human behaviour in psychology and brain research, etc.

The second level: virtuality as a prosthesis. VR as the extension of an arm, computers as prostheses to compute, think, observe, control, stimulate, and so forth, as means to boost and enrich the imagination. Examples: Medical applications, such as minimally invasive diagnostics and surgery, robots, androids or humanoids (toys *Kismet* or the *Sonydog*), clone, websites, chat rooms, cybersex, etc.

The third level: virtuality as a surrogate reality. The prosthesis takes on a life of its own, the computer turns into a creation machine. Virtual worlds replace the real world. This happens through the perfecting of simulation: avatars, mock identities in the Net; caves or holo-decks, etc. or through linguistic identification (metaphors), propaganda, e.g.: reportage on military conflicts and wars (Gulf War), advertising, news

The price to be paid for these new abilities is high:

1. Loss of historical knowledge and abilities: dried milk instead of mother's breast, crafts and repair works, no

larder in modern buildings, home trainers instead of outdoor activities and manual work, etc.

2. Loss of history
3. Loss of identity and authenticity as human beings
4. Collective loss of reality.
5. Vulnerability of the information society.
6. Receiving masses of junk information and spam.
7. Loss of the experience of direct contact with nature and other human beings. De-naturalization of everyday life.
8. Having more trust in machines than in human beings.

Donald Theall on the significance of convergence in cyberspace:

> Ultimately, the full development of cyberspace, or virtual reality, will provide people with the capability to interact within all-encompassing environments across space and time, while simultaneously utilizing data bases of varying media mixes from many distant and disparate locations.[5]

Human self-perception and -definition is referring to one's own personal sphere of action, not towards the public at large. Out of it, a lack of interest in societal and political problems, issues, and developments is generated.

This lack of interest is being nurtured by an uncontrollable amount of information. Due to modern media and its 24/7 flood of information, man feels well informed, enlightened, individualised, authentic – and very happy. What will be the impact of this media hybrid on human communication, and, more important, on his identity?

There are numerous and increasingly interconnected databases, set up by the authorities and by private companies alike. The diverging interests of these different actors are leading to different outcomes for the data's source – us. We will not be able to control who has which access to which amount of our personal data. It is said that 'those who control the past, will control the future', but for us it is 'those who control the present, will control the future.'

3. Conclusion

We already live in the world of *Minority Report*. The march of history surely cannot be halted. However, we all should consider wisely whenever we happily hand over personal data to a marketing agency or a customer loyalty scheme. Security is an important issue in our times, shaped by an increasing insecurity due to globalisation, the radical change of our

societies, and the international threat of terrorism. Our wish for security, however, may paradoxically lead to even more insecurity, the loss of identity, and the loss of history. The image of uber-individuality, communicated by clever marketing, is already a fake. Individuality and authenticity was yesterday – tomorrow will be the age of the adjustable mass, in the same way that nature has become adjustable to us. We do not think any longer, we believe. It is time that machines will rise to power.

Notes

[1] http://www.nocards.org.
[2] H Arendt, *The Origins of Totalitarianism,* Harcourt Brace Jovanovich, San Diego, 1979, pp. 380-381.
[3] J Carey, 'Harold Adams Innis and Marshall McLuhan,' *McLuhan: Pro and Con*, Penguin Books, London, l969, p. 284.
[4] D de Kerckhove, *Connected Intelligence: The Arrival of the Web Society*, Somerville House Books, Toronto, 1997, p.148.
[5] D Theall, *Beyond the Word: Reconstructing Sense in the Joyce Era of Technology, Culture and Communication*, University of Toronto Press, Toronto, 1950, p. 21.

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For a Khōrismology of Cyberspace

Dominic Williams

Abstract
This paper seeks to explore the boundaries and frontiers of cyberspace in order to better understand the space of cyberspace. Immediately apparent to the cartographer of cyberspace is the privileged relationship that exists between cyberspace and the boundary itself. Rather than simply an unbounded, infinite space, cyberspace always already inhabits the boundary. Cyberspace is the final frontier in that it is pure frontier. Cyberspace, the interface par excellence, if you like. Cyberspace is at once the 'space' in between inside and outside, self and other and the point at which they intersect, eroding such distinctions. It is no accident that cyberspace emerges alongside the breakdown of critical theory. The emergence of fatal theory mirroring the fatality (death?) of Newtonian physics and space in the wake of cyberspace. While fundamentally non-substantial, cyberspace is never empty (or full), representing a substantial nothingness analogous to the black hole, simultaneously a point of absolute mass and a point at which all mass, all matter, disappears. More accurately, cyberspace is the embodiment of Derrida's khora, the ultimate receptacle, not as empty geometric space but always occupied. Cyberspace is categorised by the radical oscillation of the khora, that is, oscillation between different kinds of oscillation, specifically exclusion (neither/nor) and participation (both/and). Cyberspace's khoratic nature is representative of its broader affinity with the third term or middle articulation (Mittelglied) of contemporary theory. In short, cyberspace is to space what paragon is to ergon. This can be seen in the widespread scepticism and cynicism that both cyberspace and poststructuralist theory attract. Amongst this, mostly ill-founded, negativity there is a genuine question. As Virilio's overly pessimistic formula for new technology, 'who loves well punishes well', reminds us, there is no such thing as the unilateral gift. Cyberspace inevitably consumes space as the boundary infringes on the open, parergon on ergon, medium on message … you get the picture. It remains unclear to what extent cyberspace fulfils the social function of the third term represented by the socially cohesive wound of Bataille. According to Bataillean logic, for Cyberspace to fulfil such a function we must embrace its love complete with the accompanying punishment. This paper will join science fiction and the mass media in speculating on the result of such a liaison. A liaison cyberspace seeks to consummate at the interface.

Key Words: Cyberspace, khōrismology, Bataille, parergon, ergon.

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> One space remains to be broached. Neither inside nor outside, it spaces itself without letting itself be framed but it does not stand outside the frame. It works the frame, makes it work, lets it work, gives it work to do […]. It is situated. It situates between the visible edging and the phantom in the center […]. Between the outside and the inside, between the external and internal edge-line, the framer and the framed, the figure and the ground, form and content, signifier and signified and so on for any two-faced opposition.
>
> Derrida, *The Truth in Painting*[1]

> Between the sensible and the intelligible, belonging neither to one nor to the other, hence neither to the cosmos as sensible god nor to the intelligible god, an apparently empty space – even though it is no doubt not emptiness? Didn't it name a gaping opening, an abyss or a chasm? Isn't it starting out from this chasm, 'in' it, that the cleavage between the sensible and the intelligible, indeed between body and soul, can have place and take place?
>
> Derrida, '*Khōra*'[2]

I had promised to deliver a paper on the boundaries of cyberspace in the belief that cyberspace, like all spaces, would be best understood through an investigation of that which delineates it. However, in attempting to trace the boundaries of cyberspace, one realizes the impossibility of such a task. The encounter with the essence or truth of cyberspace, like the Lacanian encounter with the real, remains forever missed as a result of the special relationship that exists between cyberspace and the boundary itself; the boundary always already the split through which one encounters, as encounter forever missed, the real.[3]

In cyberspace we see the radical incorporation of the open into the boundary, a proximity that is mirrored in contemporary society and theory. In particular, Derrida's interpretations of *parergon* and *khōra* evoke such proximity and provide a new model for understanding cyberspace.

Our encounter with cyberspace is, indeed, already twice missed to the extent that everything is already reducible to the metaphysical laws of cyberspace. Just as cyberspace attempts to put on an (inter)face as close to physical reality as possible, the real world is informed by the logics of cyberspace. Most of our communication is already mediated by computational cyber-code. You get a sense of this when you receive a document written in a different computer format; the code remains visible in

the indecipherable mistranslation received. Most of us still need prosthetic devices to translate for us, but we have all heard of people who see the world in code. We find second order cyborgs particularly scary.

The popular view that cyberspace can be seen as a prosthetic extension of the individual, both physical and psychological, preserves the master/slave dialectic as model for man's relationship with technology. But, as Paul Virilio and most contemporary science fiction suggest, our relationship with technology is far more complicated than this. We need only return to the cyborg to better understand this. The cyborg is at once a human supported by technical prosthesis and a machine that utilises the human, both physically in the human tissue it uses to mask its 'real' form, and emotionally and psychologically in the ideas and behaviour, the very mode of being, that it seduces from the human. This is representative of the ambiguous relationship we have with technology and that physical reality has with cyberspace. It is easy to see in what sense society is cyborgial; both to the extent that we provide the human (inter)face of cyberspace and in as much as the boundary is already blurred. We would do well to remember the Lacanian formula of feigning as the feigning of feigning itself;[4] in the case of cyberspace, its feigning of total integration into physical reality hides the extent to which it is truly integrated.

Further evidence of this integration can be found in the common complaint against cybersex, that it is a distanced and technologically mediated procedure, begging the question; when is sex not like this? Distanced and technologically mediated by both the proliferation of prophylaxis, increasingly technical sex toys and pornography, and in the way in which we interact and see each other's bodies, our fantasy world develops in cyberspace and has trouble leaving it.

Our encounter with cyberspace is twice missed, then, to the extent that we are never not in cyberspace[5] or, at very least, a space punctuated by cyberspace. This being the case, we must abandon the retarded view that cyberspace is limited to the World Wide Web or that it ever could be, and extend the scope of our investigations accordingly. If we acknowledge that the popular fear that cyberspace will evolve out of the network is a ruse to convince us that it already has not, then to limit one's investigation of cyberspace to the www is to fall for the trap. Equally, the conservative attitude that Zizek suggests we should adopt towards new technologies in their infancy is impossible in the case of cyberspace.[6] Accordingly, what is required is a radical analysis of cyberspace.

1. *Parergon*

The space that remains to be broached 'in order to give place to the truth in painting'[7] is the *parergon*, that space outside of work or of the usual space of work, but not, properly speaking, *outside* of (the) work. Analogous

to the *passe-partout* of the framer, the *parergon* inhabits and supports the frame but is simultaneously obscured by and obscures the frame in refusing to be framed and itself framing, in both senses of the word, both work and frame.

Immediately apparent is the privileged relationship that cyberspace would share with such a space. Rather than simply an unbounded, infinite space, cyberspace always already inhabits the boundary, at once the 'space' in between inside and outside and the point at which they intersect, eroding such distinctions. Like the parergon, cyberspace converges at the boundary, in the case of cyberspace, at the interface. Our experience of cyberspace is of the edge, the interface and, as Zizek points out, we are encouraged to 'take things at their interface value'[8] in cyberspace with little concern for what lies beneath.

The extent to which physical reality participates in the shift to the periphery characteristic of cyberspace can be seen Virilio's speculations on the modern city; in which, as people move uniformly out from the centre, the 'centre will be nowhere and the circumference everywhere'.[9] To look at it another way, we will be left with a hyper-abundance of centres, an abundance of points, all incapable of pointing to anything reminiscent of the absolute proximity of subject and text in cyberspace.

Cyberspace's special relationship with the boundary becomes obvious if we consider the fundamentals of cyberspace, the *fundamentum* always a boundary of sorts.

William Gibson coined the term 'cyberspace' in his science fiction novel *Neuromancer*. Already this suggests that cyberspace is to theory what scientology is to religion. Cyberspace's etymology is weak; the cyber from the Greek κυβερνήτης (steersman or governor) via cybernetics. Cyber is to steer or govern, then, but also to gamble (κυβεύω) and, by association, chance and deceit or trickery. The link between cyberspace and the *tuché* of Lacan, through which we 'encounter' the real, is becoming clearer. *Tuché* is inseparable from chance, the encounter with the real a chance (accidental) encounter.

Parergon is, by definition of only secondary importance, a category subordinate to the main enquiry, but, in cyberspace, we see the realisation of Derrida's project of bringing the *parergon* to the fore. It is naive to think that such a move can be achieved at no cost, for as Paul Virilio's formula for new technology, 'who loves well punishes well', reminds us, there is no such thing as the unilateral gift. Cyberspace in framing or punctuating space necessarily frames, or sets up, space. Cyberspace inevitably consumes space as the boundary infringes on the open, *parergon* on *ergon*, medium on message. Once again, as the city moves into the periphery the centre, indeed the very idea of a centre, disappears. In cyberspace the consequences of such decentreing are potentially more serious than a sprawling hyper-suburbia.

For Virilio, the problem arises as a result of the accident that is built into all technology; 'to invent the train is to invent derailment'. Virilio believes that at the end of this process, with the total acceptance and absolute incorporation of technology into everyday life, awaits the generalised accident. Cyberspace brings us closer to this end in the absolute incorporation of the accident ('symptom' in Hegelian terms) into the system itself, at once, rendering cyberspace the ultimate technology and providing a new understanding of the generalised accident and its consequences.

2. Χώρα

It is no accident that cyberspace emerges alongside a theoretical tradition that embraces the third term or middle articulation (*Mittelglied*), the emergence of fatal theory mirroring the fatality (death?) of Newtonian physics and space in the wake of cyberspace. One of the most relevant articulations of the third term to cyberspace is Derrida's reading of *Khōra* in Plato's *Timaeus.* For Derrida, *khōra* is more than just space or place, becoming the ultimate receptacle, in that, like cyberspace, it has nothing that is its own.

While fundamentally non-substantial, cyberspace is never empty (or full), representing a substantial nothingness analogous to the black hole, simultaneously a point of absolute mass and a point at which all mass, all matter, disappears. More accurately, cyberspace is the embodiment of a *khōratic* receptacle, not an empty geometric space, but always occupied. Further, the occupied emptiness of cyberspace participates in the radical oscillation of the *khōra*, that is, oscillation between different kinds of oscillation, specifically exclusion (neither/nor) and participation (both/and). This is the very essence of the digital; to negate all substance, all agreement between form and substance and form and content, to emerge out of nothingness and oscillate in the virtual space that it opens up.

In *khōra,* Derrida sees the possible articulation of a logic outside of logos, a mythic logic at the heart of *khōratic* oscillation that is usually considered of secondary importance or *parergonal*. The subordination of the mythic is largely due to myth's problematic genealogy. As Derrida suggests, with each distancing or mythologising of the accounts that make up the action of the *Timaeus,* the author gets farther and farther away and, in getting farther, the mythic *khōra* loses its father. *Khōra* is not woman then, despite the analogy of *khōra* as mother or nurse and the obvious wombal and vaginal characterisation of *khōra* as ultimate receptacle. Rather, *khōra* is a bastard child.

Cyberspace shares this problem of (the name of) the father, its weak etymological origin pointing to a more serious problem to do with its origins. Cyberspace, as a non-physical terrain born of computer systems, does not fit into traditional cosmology. Particularly problematic is the question of

cyberspace's genealogy. This will become clearer if we return to the fundamentals of cyberspace. According to a Lacanian reading, *fundamentum* is necessarily associated with *pudendum*, remaining squarely within the sexual or, at very least, the homosexual in which fundament and *pudendum* are truly inseparable. The shift from *ergon* to *parergon* and the emergence of cyberspace can, subsequently, not be read as a wholesale shift from the masculine to the feminine. As Zizek suggests, such an analysis misses the point that 'a cyborg monster has no sex, it is asexual in the sense of a Lacanian *lamella*'.[10] Cyberspace participates in the loss of animal sexuality that gives rise to the all too human *lamella*. This can be seen in the status of ideology in cyberspace; in the absence of any positive or guiding principle, negativity, and all ideology is rendered empty, in that it fails to recognise and embrace the immanent emptiness that is of the order of cyberspace. Of the order of *Khōra*.

While there is definitely a special relationship between cyberspace and the third term, it remains unclear to what extent cyberspace fulfils the social function of the third term represented by the socially cohesive wound of Bataille. The other side of the equation is that we may already have arrived at the generalised accident of Virilio in the incorporation of the 'logics' of cyberspace into physical reality. Without a doubt, cyberspace participates in a kind of generalised accident, marked by a crisis in critical theory and the introduction of uncertainty into the world at large. However, this crisis need not herald an age of theoretical quietism, a negative nihilism that remains as inert as it is banal. Rather, the impossibility of theory calls forth new theories of the impossible. As Baudrillard suggests, 'recognising that the movement of the system is irreversible', we must push these logics to their limit, 'to the point where the system itself creates the accident'.[11] Derrida's concepts of *khōra* and *parergon* provide a model for the theorisation of cyberspace along these lines. In admitting a logic outside of logos, Derrida provides a model for a 'space' outside of space and for the framing of space by cyberspace. It is in this 'space' between being and Being, in this *khōrismos*,[12] that cyberspace can be found, oscillating in the open created up by its own oscillation.

Notes

[1] J Derrida, *The Truth in Painting*, trans. G Bennington & I McLeod, University of Chicago Press, Chicago, 1991.
[2] J Derrida, *On the Name*, Meridian, Stanford, 1995, p. 103.
[3] J Lacan, *The Four Fundamental Concepts of Psychoanalysis*, trans. A Sheridan, Hogarthe, London, 1977, pp. 25-26.
[4] S Zizec, *The Plague of Fantasies*, Verso, London, 1997, p. 140.

[5] If we accept the popular view that we are all already cyborgs then it follows that we are always, in a sense, in cyberspace.
[6] ibid, pp. 130-131.
[7] Derrida, op. cit., *The Truth in Painting*, 11.
[8] Ibid., 131.
[9] P Virilio, *The Virilio Reader*, Blackwell, 1998.
[10] Zizek, op. cit., p. 136.
[11] J Baudrillard, *Paroxysm*, Verso, London, 1998, pp. 23-24.
[12] Derrida, op. cit., *On the Name*, p. 148.

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From DNA to TCP: Humanity and Evolution in Cyberspace

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Abstract
We have used the words 'mechanical life,' 'the mechanical kingdom,' 'the mechanical world' and so forth, and we have done so advisedly, for as the vegetable kingdom was slowly developed from the mineral, and as, in like manner, the animal supervened upon the vegetable, so now, in these last few ages, an entirely new kingdom has sprung up of which we as yet have only seen what will one day be considered the antediluvian prototypes of the race. We refer to the question: What sort of creature man's next successor in the supremacy of the earth is likely to be. We have often heard this debated; but it appears to us that we are ourselves creating our own successors; we are daily adding to the beauty and delicacy of their physical organization; we are daily giving them greater power and supplying, by all sorts of ingenious contrivances, that self-regulating, self-acting power which will be to them what intellect has been to the human race. In the course of ages we shall find ourselves the inferior race. Inferior in power, inferior in that moral quality of self-control, we shall look up to them as the acme of all that the best and wisest man can ever dare to aim at. No evil passions, no jealousy, no avarice, no impure desires will disturb the serene might of those glorious creatures. Sin, shame and sorrow will have no place among them. Their minds will be in a state of perpetual calm, the contentment of a spirit that knows no wants, is disturbed by no regrets. Ambition will never torture them. Ingratitude will never cause them the uneasiness of a moment. The guilty conscience, the hope deferred, the pains of exile, the insolence of office and the spurns that patient merit of the unworthy takes – these will be entirely unknown to them. – Samuel Butler, 1863[1]

Key Words: Cyberspace, mechanical world, dualism, situated-action.

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Cyberspace has changed our world, but at the same time it has created an entirely new one that may or may not truly belong to us. Any discussion of the virtual world we call cyberspace should properly include a look at the inhabitants of that world, most often called autonomous agents. These agents are not only able to fully exist in a world where we are visitors, but they appear to be evolving at a relatively rapid pace. An argument can be made that if artificial intelligence is going to emerge, cyberspace is the most likely location for it, with its massively distributed computing power and all of the benefits of graceful degradation that goes along with that. If cyberspace

qualifies as the type of environment where intelligence might emerge, where does that leave humanity?

Imagine, for a moment, that your body is simply an illusion. You believe you are reading this page with your eyes, and holding a book with your hands, but in fact you have never even possessed eyes or hands. You are nothing but a brain, suspended in a vat of gelatinous goo, and a scientist pokes and prods your neurons expertly to simulate the activities of a body that you do not have. More extreme than the *Matrix*, in which people have bodies but never fully use them, in this scenario your mind is much more like a computer, only able to obtain the information given to it by those who control it.

Many philosophers have imagined this scene before. René Descartes fathered the modern notions of dualism,[2] or the separation of body and mind, using a scene very similar to this. John Pollock illustrated forms of extreme scepticism using the brain in the vat, arguing that the mere possibility that one is a brain in a vat is enough to question all of our forms of knowledge.[3] The entire field of Artificial Intelligence set out originally to build a blank computer with an appropriate architecture, and simply 'fill its head' with enough information about the world to create intelligence within it.

As appealing as some of these notions remain to researchers today, the evidence is stacked against them. While some forms of dualism persist, it seems tragically incorrect to claim that the mind doesn't reside in the brain, or at the very least remain terminally connected to it in some way, which is enough for our purposes. If we accept the extreme sceptic's viewpoint, we become locked in a world of solipsism from which there is no escape, and you might as well stop reading now since you have no proof that you're actually reading anything or that there is such a thing as language at all. And while many of the early crusaders in AI wrote extensively and intelligently about thought being nothing more than simple symbol manipulation, and therefore perfectly re-creatable in a machine, current experiments show that the largest success of this type in the field, Cyc, is simultaneously a spectacular failure.[4]

Luckily, there is a relatively new philosophical concept that goes a long way in solving many of these problems: Embodied Cognition. Simply put, this is the argument that claims intelligence arises through the use of the body, and that many of one's thought processes are inextricable from one's body. Also called 'situated action', this concept has been widely embraced by philosophers who, having seen the evidence from experimental psychology, accept that our bodies control the sorts of thoughts we have and even the concepts we obtain. While still devoutly rejected by many of the loudest supporters of symbol manipulation-as-thought, a simple illustration of the power of this theory shows readily how hard it is to reject: Simply close your eyes and imagine that your body is drastically different than it in fact is. Imagine that you were born as a member of the opposite sex. Would your stereotypical concepts be any different than they are? You would almost

certainly see the world in different ways, and have different ideas about things. Imagine you were born without legs, and had to maneuver the world in a wheelchair. Or imagine that you were born without sight, or arms, or a sense of smell. Any of these strictly bodily diversions from regularity would almost certainly produce profound differences in your thought processes and concepts.

What does it mean to be intelligent? For the sake of brevity and simplicity, we will use the definition that Steven Pinker puts forth in *How the Mind Works*. He declares intelligence to be, 'using knowledge of how things work to attain goals in the face of obstacles.'[5] Pinker also goes into great detail explaining that brains evolved because of their ability to process information. The comparison to machines seems obvious.

Think back to one of the most important thought experiments from Plato, known as the Allegory in the Cave.[6] While Plato used it to illustrate something very different, it serves a valuable purpose in our discussion of embodied cognition. Briefly, there are people chained to a wall in the cave, facing away from the light. They are unable to move around bodily, and therefore as people move back and forth in front of the light behind them, the only experiences the chained people have with objects in the world is via the shadows they cast on the wall in front of them. To these people, those shadows are the objects themselves. They don't know that there is more beyond that. This is an excellent reflection on how our bodies are the tools that provide us with information about the world. If these people had full use of their faculties, they would be able to not only see the objects themselves as multi-dimensional, but also feel the textures of them and smell and taste them as well. There is plenty of discussion about the importance of the body in cognition these days, so I will not recount it all here.[7]

However, there is a vital piece of the argument that is barely discussed in philosophy, and yet completely taken for granted in evolutionary biology (the science that obviously accounts for why our bodies are the way they are). That important piece is the environment. The environment is not only what made our bodies the way they are, but it is because of interaction with our surroundings that our well-suited bodies are able to pick up information about the world and catalyse cognition. So much importance is being placed on the role of our bodies in cognition that the role of the environment in cognition is being overlooked. It is the construction of the cave as much as the constriction of the bodies within it that brings about the warped concepts that define the inhabitants of Plato's cave.

Obviously, evolution is to thank for moulding our bodies uniquely to fit our environment. The environment drives the shape of our bodies via evolution, and the shape of our bodies drives intelligence. Therefore, the real requirements for intelligence to arise are a proper environment and evolution. Evolution itself can be summarized quite easily. Simply put, there must be

heritability, mutation, and competition. Heritability simply means that offspring must resemble the parents in some way. In the case of humans, this happens through genetic combination. Mutation is the notion that there is some change between parent and offspring, and in the case of humans it often occurs by accident. Lastly, competition for resources is necessary for evolution to occur. There must be more offspring than can possibly survive, which drives Darwin's notion of natural selection – the idea that only those organisms best adapted to their environments will survive to pass their own genes on to the next generation.

Evolution was once uniquely in the domain of biology and the life sciences, but the idea has been commandeered by almost every discipline in existence, most likely as a result of its universal utility. Psychology and sociology love to discuss the evolution of our brains and cultures, and now even computer science has adopted the notion to describe what is called 'genetic algorithms,' which are usually programs that run on the 'survival of the fittest' notion over a large sample size. It doesn't take a terrible stretch of the imagination to discover evolution occurring in cyberspace, specifically in the form of autonomous agents, also known as 'bots.'

If, as I stipulated earlier, all that is required for intelligence to arise is a proper environment and evolution, then what is to stop autonomous agents from developing a recognizable form of intelligence in cyberspace? Does cyberspace qualify as a rich enough environment to produce the feedback in the genetic code necessary to develop some kind of bodily structure to acquire intelligence in autonomous agents? Let's look a little closer.

First of all, I take for granted that there is a form of evolution occurring in cyberspace. If you look closely at the form bots have taken since their creation, you'll see a definite trend toward increasing adaptation to their surroundings, an obvious lineage from one form of agent to the next, and an intuitive notion that every autonomous agent written cannot possibly survive and flourish, or cyberspace would be filled with meandering code and the entire 'space' would become sluggish and all but unusable for it's current purposes.

Just as man had his meagre beginnings in Homo habilis and Australopithecus, autonomous agents had theirs in early daemons and even characters in text-based games.[8] What began as a simple autonomous program running on a single system at MIT in the 1960's blossomed into what can only rightly be called a race of creatures that serve their different purposes, sometimes working in groups or communities, and compete to be the most suitable program for their unique environment of cyberspace.

If bots truly are evolving in cyberspace, which seems very probable, then we ought to be able to predict a likely course that their evolution will take. They have already gone from being very simple programs designed to perform a single task undirected (such as the first MIT daemon), to being

complex strings of code that wander through cyberspace gathering and sorting information, simultaneously learning better ways to do their jobs (such as the Google web spiders).[9] They are becoming increasingly complex, and rather than having rigid code for a single task, they are more flexible now, and able to handle whatever new obstacles cyberspace offers them this week.

Up until now, we've mostly examined cyberspace from the detached perspective of an onlooker, but as we all know, humans are not only the creators of this virtual space, but we also like to think of ourselves as its inhabitants. Assuming first that environments play a vital role in the evolution of intelligence, and second that bodies can be understood to be simply the recipients of the feedback from said environment (making the string of code running a bot the rough equivalent of the genetic code that forms our own bodies), we can show that bots very well may be properly situated for intelligence to arise within cyberspace. So where does this leave humanity? Out in the cold, for better or worse.

If you look back to our earlier discussion of bodies, you will recall the example I used to illustrate the notion that bodies are necessary for intelligence, where you were asked to imagine your body as something drastically different than it is. Now, I ask you to dwell on that example a moment longer. If our bodies are the things that somewhat rigidly determine our concepts (and therefore oversee our thoughts), then it seems more than fair to say that they make us uniquely who we are. Each body is different from the others in various ways, and those ways (along with the environment) create the different experiences that make up our respective intellects.

You may be wondering how the makeup of the human body relates to cyberspace. Well, in a very real sense, it doesn't. And that is precisely the problem. If our bodies (both the genetic code that dictates their formation and the actual physical manifestation of that code) determine uniquely who we are, then what happens to personal identity in cyberspace? Without our bodies, we are merely visitors to a place that we can never fully enter. Cyberspace must always remain a 'virtual' place to us, and humanity is relegated to the position of the outsider (literally).

What this leaves us with is that there is exactly no way to know what it means to be human in cyberspace, since our humanity is intricately connected to our bodies, and they are by definition forbidden to ever enter the space itself. We can discuss those parts of our humanity that are relinquished when we enter cyberspace (in many cases this includes inhibitions, morals, and accountability) or we can discuss those parts of our humanity that are squeezed between the cracks into our text and then actually make the journey to be cast off into cyberspace. These are both important discussions (although space limits them here). Yet it will always return to the fact that our bodies define us, and without them, we are less than human.

It has never been an issue for humanity that we play the role of the outsider in cyberspace, because it was our creation and regardless of the lack of physicality, it was still our space. However, we very well may have competition someday. And not only will they be necessarily intelligent (or they wouldn't be competition), but these competitors (in the obvious form of autonomous agents) will possess the very interesting quality of existing solely and uniquely within the space that we can never fully enter. In such circumstances, we have to ask whether it will cease to be our space at all, and whether or not it will become distinctly their own.

Throughout evolutionary history, there has been competition between similar species in which only one survives. The phylogenic tree of our own species development shows that Homo habilis and Australopithecus co-existed for some time, but we all know the outcome: only modern humans remain. It is exceedingly difficult and controversial to pinpoint exactly what dictates survival of one and extinction of the other, but one aspect that seems incontrovertible is control over one's environment.[10] The more adaptable one is to the things they cannot truly control, the larger the chances of that one's survival. This of course poses a unique problem in the potential conflict between man and machine: it is not our environment, but we clearly entertain a larger degree of control over it in so far as we could, in theory, simply unplug it. However, the consequences for our own environment (breakdown of commerce, communications, and so forth) would be near catastrophic at this point, were we to simply unplug the Internet. There is no easy way to predict the outcome of such a conflict.

The great evolutionist George Gaylord Simpson said it well:

> The fossil record shows very clearly that there is no central line leading steadily, in a goal-directed way, from a protozoan to man. Instead there has been continual and extremely intricate branching, and whatever course we follow through the branches there are repeated changes both in the rate and in the direction of evolution. Man is the end of one ultimate twig. The housefly, the dog flea, the apple tree, and millions of other kinds of organisms are similarly the ends of others.[11]

Will agents be just another ultimate twig on the tree of life, co-existing and co-evolving like the housefly? Or will they erupt from our own branch, a new kind of descendant that shares a new kind of code with us, and eventually be the ultimate twig where we once were? Biology still disagrees over whether such things rely on good luck or good genes, but we can deduce at least this much: we can never completely enter their environment, but with our help, they can easily enter ours. This distinction is real, and important.

George Dyson, in his discussion of the evolution of artificial intelligence, said, 'The emergence of life and intelligence from less-alive and less-intelligent components has happened at least once.'[12] Who are we to say it hasn't recently happened again?

Notes

[1] S Butler, *Darwin Among The Machines*, a letter to the editor, Christ Church Press, 1863.
[2] R Descartes, *Meditations on First Philosophy*, in *Descartes: Selected Philosophical Writings*, trans. J Cottingham, Cambridge University Press, New York, 1988).
[3] J Pollock, *Contemporary Theories of Knowledge*, Rowman & Littlefield, Savage, Maryland, 1986.
[4] For more information on the Cyc project, see http://www.cyc.com.
[5] S Pinker, *How the Mind Works*, Norton, New York, 1997, p. 188.
[6] Plato, *The Republic*, Book VII.
[7] For a good discussion of these topics, I recommend G Lakoff & M Johnson, *Philosophy in the Flesh*, Perseus Books, New York, 1999
[8] A Leonard, *Bots: The Origin of a New Species*, Penguin, New York, 1997, 1, p. 25.
[9] Information on Google's technology can be found at the following URL, although the search algorithms are not public. http://www.google.com.
10 GG Simpson excerpted from *This View of Life* in *Evolution Extended: Biological Debates on the Meaning of Life*, MIT Press, Cambridge, 1994, p. 33.
[11] Ibid. 34.
[12] GB Dyson, *Darwin Among the Machines: The Evolution of Global Intelligence*, Perseus Books, Reading, 1997, p. 9.

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The Cyborg Body Politics: Politics in the Post-Human Age

Renata Koba

Abstract
In the post-human age the continuous proliferation of technological devises or cybernetic machines makes the boundaries between the human and the machine more blurred. Cybernetic systems are being integrated into our lives, bodies. As Chris Hables Gray (1995), an American critic of technology claims, there is no longer a partnership between humans and machines, it is rather a symbiosis which is managed or controlled by cybernetics, the language common to both organic and mechanical bodies. Thus one might speak about the age of the vital machine, the fourth discontinuity[1] or the age of the transhuman that is the co-evolution of humans and machines. That fusion with technology causes shifts in identity of individuals and the resultant organism (cybernetic organism) is one that, although derived from a human precursor, is no longer recognisable as naturally human. The following text attempts to interpret the implications of the fourth discontinuity. It shows how the language of technology redefines, rewrites and re-establishes stories about identity, politics, gender, love and death. It focuses on aspects or consequences of cyborgisation of societies as well as human beings. People are definitely changing their perspectives through the fusion with technology and thus, just as Frankenstein's monster, the good Terminator or Spielberg's mecha (mechanised organic) tried to speak as humans, now humans seek to speak as cyborgs in order to give voice to new experiences. Cyberculture reflected in the Internet, video games, drugs, music and rave parties is spreading at a high speed. All these changes reflect new telecommunication technologies. Since the bodies of people, business and government are becoming more tied to technology they too become cyborgs. And if humans accept their new status as a cyborg they might perceive and confront new changes from a cyborgian point of view offering novel and shocking perspectives or possibilities of living in the new world order.

Key Words: Cybernetic systems, cyberculture, technofeminism, humanoid body.

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I would like to begin with a quote by Claudia Springer whose words might summarise the main points of my paper:

> Transgressed boundaries [...] define the cyborg, making it the consummate postmodern concept. When humans

> interface with computer technology in popular culture texts, the process consists of more than just adding external robotic prosthesis to their bodies. It involves transforming the self into something entirely new, combining technology with human identity. Although human subjectivity is not lost in the process, it is significantly altered.[1]

In this post-industrial age we are witnesses and participants of the integration of cybernetic systems into our lives and bodies. This merging of human with the machine has made the boundaries between these dichotomies very blurred. For Chris Hables-Gray, an American critic of technology, this is more of a *symbiosis* rather than a *partnership* between humans and machines.[2] For Gray, it is the age of the vital machine or the age of the transhuman. This paper will attempt to analyse how the language of technology re-defines, re-writes and re-establishes narratives of identity, politics and gender in cyberculture.

Our perspectives are definitely changing through this fusion with technology and thus, just as Frankenstein's monster, the good Terminator or Spielberg's robot boy tried to speak as humans, now humans seek to speak as cyborgs and give voice to new experiences. Cyberculture as reflected in the Internet, video games, music and rave parties is becoming more popular at world level, and all these changes are producing new telecommunication strategies and new beings. Since peoples' bodies, businesses and governments are becoming more involved with technology, they too become cyborgs. And if humans accept their new status as cyborgs they might experience alternative lifestyles from a cyborgian standpoint in a new world order.

Bodies have always been interpreted as maps of power and identity and the metaphor of the cyborg body might prove useful when talking about influences of technology upon societies since it redefines many of the most basic political concepts of human existence and human society. Gray stresses how the metaphor of the organic illustration of the body politic introduced by Aristotle is now being redefined. In the 17th century Thomas Hobbes offered a mechanistic vision of a society claiming that the state is a machine and that people are its parts, all together constituting a natural king's body. According to Gray, Hobbes' *robot* body politic metaphor might be applied to post-industrial, post-human societies of the 21st century. The idea also reflects the theory of Rene Descartes who in 1641 developed a concept of the human body as a kind of automaton or machine. In a technoscientific state the body politic is no longer illustrated as a king's body but as a cyborg body. In this Information Age, in order to define society or the state one might use a metaphor of an organism as an information system linked to prosthetic machines. Society might be perceived as a prosthetic body since it is composed of various autonomous parts such as cultures, markets, myths,

histories or communities. We might conclude that post-industrial societies have become the 'machine-body of the State.'[3] Moreover, in order to understand the machine body of the State we should turn to Donna Haraway's cyborg manifesto and the concept of Technofeminism.

Donna Haraway and Technofeminism demonstrate that in both literature and real life the fusion of the human and the technological has already taken place. Since the human body has become the transhuman or cyborg/ed body, the human perspective or human subjectivity changes into cyborg subjectivity which, according to Haraway, is multiple, oppositional and continuously transgressive in character. For Haraway, science and technology are new tools for women's liberation and she uses the figure of the cyborg to transcend traditional Western dualisms. Let me quote just some of the dualisms cited in her chart of transitions: representation/simulation, organism/biotic component, reproduction/replication, scientific management in home or factory/global factory, labour/robotics, public or private/cyborg citizenship, sex/genetic engineering, mind/artificial intelligence. In her cyborg manifesto she asserts that the cyborg figure represents a stage in human evolution, a shift from an organic, industrial society to a polymorphous, information system. She concentrates on the transition from 'the comfortable old hierarchical dominations to the scary new networks' which she redefines as 'the informatics of domination.'[4] This transition, which also illustrates Gray's idea of cyborg power, might be summed up as a change from natural to artificial or from humanism to post-humanism. The dichotomies highlighted by Haraway are both material and ideological. Today reality is simulated rather than represented and this is the case of virtual reality simulators and the Internet which prove that simulation has become even more real than the real itself. People work in the Internet, in virtual agencies that have no real, geographical or concrete place but which have become virtually real places. Reproduction/replication dichotomy reveals that physical mothers are no longer needed in birthing since the new reproduction system is based on scientific intervention and the creation of biotic components. Additionally, the human mind is transplanted and transformed into artificial intelligence and thus it becomes part of a cyborgisation process. The idea of citizenship has been challenged also because the state as such does not exist in cyborged societies. As Gray claims, in a stateless technoscientific era the concept of global citizenship or cultural citizenship proves useful since they offer an opportunity to combine legal, political and social rights with human rights of national citizens.

Haraway's cyborgisation is 'hybridized, mixed and plural.'[5] In one of her interviews with Constance Penley and Andrew Ross, Haraway celebrates cyborgs as 'displaced', 'dislocated' or 'nonoriginal people,' wary of holism and needy of connection, outsiders, boundary creatures, humanoid hybrids have a partial or fractured identity and their subjectivity construction is about

forming wholes from parts.[6] Cyborg subjectivity is about making connections with other nonoriginal outsiders and she calls simians, cyborgs and women 'promising monsters' who signify.[7] Haraway says that:

> The knowing self is partial in all its guises, never finished, whole, simply there and original; it is always constructed and stitched together imperfectly, and therefore able to join with another, to see together without claiming to be another.[8]

Also, following the Vietnamese-American filmmaker and feminist theorist Trinh T. Minh-ha, Haraway uses a term of 'inappropriate/d other' to define post-gender beings.[9] The inappropriate/d other is neither *self* nor *other* but *in-between*. She claims that to be inappropriate/d other is 'to be in a critical and deconstructive relationality – as the means of making potent connection that exceeds domination.'[10] Because of the fact that cyborg identity is disrupted their subjectivity construction is about being or feeling at home in the world and these technologically created outsiders or transgendered monsters must accept their split nature by drifting in-between the human and natural on the one hand, and the technologically, artificially constructed on the other.

The technologically mediated cyborg, replicant or humanoid body might be of indeterminate gender and sexuality. The cyborg might be either feminine or masculine. Or, paradoxically, it may have attributes of both human sexes at the same time. Since the cyborg figure transgresses the sex and gender dichotomy we might talk about a new species with a cyborg gender.

Haraway's cyborgs are not subjected to a patriarchal system. Yet, they are trapped in patriarchal and late capitalist institutions. However, they subvert and transform them completely because they build new forms of agency through information and communication systems. They have no god, no father. Physically more powerful and resistant, cyborgs mock their creators which is quite vividly demonstrated in *Blade Runner*, the film with which we are all familiar. Cyborgs have no mothers either because they are not born of woman. Using Lacanian terms, 'the bastard race' does not represent or seek unity or wholeness represented by the phallic mother.[11] Since they have no organic family their subjectivities are not constructed through family relations or dependence. The unconscious self is absent in cybernetic organisms and thus there is no desire and no repression in their lives. They have no past or natural history and they do not have any origin story in the Biblical sense. They have no spiritual need, no religion and they are not needy of transcendence. They have not been made of dust and therefore they do not dream of returning to it.

To sum up, from the feminist point of view, cybernetic organism evades or transcends the following: the traditional humanist concept of women

as childbearers and raisers of children, individual wholeness, heterosexual marriage/relationship, transcendentalism and Biblical narratives, the great chain of being (represented by God/man/animal/etc.), fear of death, fear of automatism, insistence upon consistency and completeness, the Freudian family drama, the Lacanian m/other, *natural* affiliation and unity. As a final remark, we might say that cyborg politics proves that gender, race and class are culture constructs artificially imposed on us. Moreover, its politics attempts to complicate the Western system of binary oppositions which have been used to dominate women, people of colour, nature, workers and animals. As Haraway puts it 'stripped of identity, the bastard race teaches about the power of the margins […].'[12]

Haraway's theory offers a new politics in a futuristic world. Her cyborg transgresses Western dualisms and cannot be fixed according to gender, race, class, age and so on. The cyborg is performative and oppositional and the cyborged world is a world 'without a clear boundary, frayed or insubstantial', peopled by 'promising monsters' of a better future.[13] These are some of the issues that I am working on in my present research. I am concerned about the conflicts and shady areas that cyborg politics might cast on the body, such as in issues of ethics. Cyborgs may seem a long way off, especially when considered in the context of our present world which is inflicted by poverty, violence and ecological disasters. Cyborg politics should not, however, be taken as a luxury for a privileged few. Our bodies are changing, our world is changing, and never before have human beings been confronted with such a powerful opponent … or partner: the machine.

Notes

[1] Springer, 313.
[2] Hables Gray, 1995, 1.
[3] Hables Gray, 2001, 89.
[4] Badmington, 77.
[5] Penley et al., 10.
[6] Ibid., 12.
[7] Ibid., 22.
[8] Ibid.
[9] Ibid., 23.
[10] Ibid.
[11] Haraway, 2000, 81.
[12] Ibid.
[13] Ibid.

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Cyberpunk and Empire

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Abstract
The image of Empire developed in Hardt in Negri's well-known book is a science-fictional political myth of present, that owes a great deal to cyberpunk sf. I argue that the defining world-picture tacitly proposed in sf since the late 19th century has been one of a global technological regime. The sf narratives of this technoscientific imperium have been powerful mediators for national cultures as they have tried to make dramatic leaps from being nations to would-be global hegemons – much as the novel mediated the transition from pre-capitalist to bourgeois culture. I argue that Hardt and Negri's model is particularly influenced by cyberpunk, as is its vision of global communications-and-control network guided only by the ideal of intervention and distributed violence. The image of the imperial subject has much in common with the protagonists of the novels of Pat Cadigan, who depicts human minds as scenes of direct imperial/market interventions. The distributed power-centres of this Wired Empire are the new imperial cities familiar from Gibson's novels and tech noir films from Blade Runner to Ghost in the Shell. The notion that resistance in Empire is a matter of desertion (rather than sabotage) is also a theme associated with the characteristic drama of cyberpunk, in which the global network is understood to be too large to bring down, and can only be escaped from by descending into its belly or escaping into another domain: depicted on a cosmic scale in the drama of the Neuromancer trilogy, but in other important cyberpunk and c-punk influenced works as well. Finally, the improbable notion that the agent of transformation is 'the multitude,' which subverts imperial power by pragmatically withdrawing its co-operation, is a globalised version of the dictum at the heart of Neuromancer's cyberculture: the street finds its own uses for things.

Key Words: Cyberpunk, Wired Empire, William Gibson, imperialism, hegemonism.

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Sf, as a narrative mode and as a way of perceiving the world, is a genre of Empire. This is true in more ways than one. Historically, sf emerges in tandem with imperialism. The dominant sf-producing cultures are precisely the ones that were once at the wavefront of technologically advanced, hegemonistic expansion: France, the UK, Germany, Russia, Japan and the US. Each of their hyper-national projects was enabled, and indeed

driven, by technological momentum that gave the imperialist states enormous advantages over the subject peoples, and, feeding back into the metropole, inspired the construction of scientific arguments for national and racial supremacy.[1] The unconstrained use of technologies of force, transportation and communication, and the ideologies justifying this use, 'blew back' into the national cultures and dramatically undermined national institutions enforcing regional sovereignty and traditional law.[2] In the late 19th and early 20th centuries, sf mediated between the now conservative cultures of the nation-state and the new vector of national cultures toward global hegemonism. In this, sf acted much as the realistic novel had in mediating between pre-modern society and the bourgeois modernism of the nation-state. Sf has generally treated nations as retrograde and transitory historical phenomena.[3] Instead, it has assumed a hyper-global field of action – often projected onto the cosmos itself – between a very few superior forces competing for dominance, almost exclusively through technological means.

But sf is a genre of Empire in a broader sense as well. Imperialist ideology, although obviously inspired by extreme nationalism, also contains what we might call an ideal, universalist entelechy, a quasi-utopian *telos*: to wit, an abstract global system of governance that would ultimately dissolve – and thus transcend – the divisive politics of nations and historical cultures, by establishing a salutary, and perhaps even benevolent, global regime. This is the ideal reiterated in the justifications for empire provided by all imperialist states; it is the delusory rationalization opposed by all anti-imperialists.

In the 20th century, this imperial ideal was articulated less in terms of politics and economics – the putative supremacy of one or another nation-state, 'race' or cartel – than in the universal force of technological development. Technology, in this sense, transcended particular national or social justifications. It was universally accepted that power was conveyed, not merely through the barrel of a gun, but by the elaboration and intersection of technological systems throughout every aspect of social life, affecting and ensuring the global control system of de-nationalized communications. This was embodied in the simultaneous mechanical and bureaucratic *containment* of human social behaviour, and the relatively *unfettered expansion* of technological innovation in the economic sphere. This was the characteristic process of technological modernization practiced by all major world players, a process that remained relatively unconscious, except to its entrenched opponents, those who resisted modernization altogether. With the hindsight of postmodernism, and the instauration of the post-World War II Pax Americana, we can safely claim that the immanent goal served by hyper-nationalistic imperial projects was the establishment of a universalising Technoscientific Empire. Sf is the literature of this world-historical fantasy of a global technological regime.

There has been a great deal of discussion about the meaning of Empire in the contemporary world. US hegemony has made the idea of empire topical, even though most Americans resist the idea that their homespun republic has become a new Rome. Much of the discussion is fanciful, fuelled by British imperial nostalgia displaced onto the American heirs, or by the neo-conservative resuscitation of the doctrine of American Manifest Destiny. But some versions – like Hardt and Negri's *Empire* – offer serious heuristic models. For Hardt and Negri, the post-World War II world has become a de facto imperial world-system, backed by US military, economic and cultural power, but in fact an international order of institutions dedicated to the traditional goals of empire: 'world peace,' law and order, the perpetual resolution of local conflicts (or 'omnicrisis'), the substitution of practical problem-solving (often through violence) for universal ideals, of immanence for political transcendence, the management of and tolerance for local differences over the destabilizing violence of the dialectic. This is one side of what has been euphemistically called globalisation – the intensive and expansive use of technology to transform populations into subjects (enthusiastic, at best, and pacified, at least) of a global regime. Where earlier empires like Rome and France extended the rule of law and rights of national citizenship to its imperial subjects, the post-modern global regime extends the 'rights' of commodity-consumption and the participation in the circulation of technological development itself. In this sense, quantity has turned to quality: the technological unconscious of 19th century ideologies of imperialism has become manifest, and becomes the explicit goal of Empire. Politically, post-modern empire is dedicated to management, the prevention of any major disturbances of its global operation. Legitimacy is no longer a matter of putative political *subject-positions*, assent and resistance to the state, but of *subjection* to the saturation of social life by techno-scientific rationalization in the service of plutocratic elites. Practically, it is dedicated to facilitating the expansion of techno-scientific capitalism, the harnessing (and indeed incitement) of global flows – of populations, capital, and culture – to create material wealth. In this regime, resistance cannot (according to Hardt and Negri) issue from revolutionary classes or peripheral sectors. Utopian universalism has no ground to grow in, no relevance. Resistance comes instead from the passive non-compliance of society, a mass desertion from the very concepts of legitimacy.

(I should note here that this model of a US-backed global imperium has been seriously rocked by the Iraq invasion, in ways that defy easy analysis. The global capitalist system had in fact been expanding formidably throughout the world, with sophisticated mechanisms of self-modification in the various treaties, international institutions, NGOs, etc. The collision with fundamentalist groups was, conceivably, quite manageable, since the primary enemies of Western liberalism are themselves heavily invested in techno-

science, even if they disavow it. With terrific irony, the American adventure in Iraq appears to have undermined much of the genius of this invisible capitalist imperium. As if Rome had set out to compete with its own Empire, the US may have catalysed a global self-encirclement, the very [historically predictable, except for its pace] inversion of its explicitly hegemonistic goals; and has wasted its formidable powers of indirect violence by committing its forces to a unwinnable conflict, and thereby losing much of its power to threaten others. In the same move, it has deprived American capitalists of much of the military protection that they have relied on in their global expansion [a process repeated internally through irrational and rapacious economic policies]. The Bush Administration may have fatally injured the Pax Americana, not only by violating the codes of international co-existence, but by discarding the ideology of world peace itself, and opening the space for *bellum omnia contra omnes*.)

Cyberpunk's importance is intimately connected with sf's imperial character. Cyberpunk emerged in the US in the early 1980s, at the moment when post-World War II US global power was felt to be challenged for the first time by a post-modern state – Japan – whose power lay, not in traditional tools of hegemony, armies and bureaucracies, but the new imperial means of hyper-rationalized commodity production. At that moment, it appeared that Japan had become master of the subtle, bloodless technologies of cybernetics and robotics, and would ultimately become so in biotech as well, and had accelerated the pace of high-technological capitalism beyond what the Western democracies could sustain. With the historically unprecedented physical establishment of Japanese companies, Japanese corporate culture became an ambiguous model of the institutions that might dominate the future. The irony, of course, came from the fact that the U.S. hegemon, which had always prided itself on its youthful energy, was viewing itself as aging – (a new side to Gertrude Stein's aphorism that 'The US is the oldest country in the world, since it was the first into the 20th century'), its infrastructure, factories and cities decaying, while the new powerhouse inflicted its neo-colonial presence just as the US had for generations, without its population being conscious of it.

The Japanese were, strikingly, not the enemies of the US in the Cold War. Indeed, they were more than allies. They were technically *creatures* of the US – politically and technologically. Americans thus feared, not defeat by an adversary, but that they would be superseded, that they would lose their place at the leading Edge (to use a phrase dear to cyberpunks). Japanese technology was also perceived to be not only extremely innovative and productive, but also inherently non-aggressive, and hence seductive. Since Japan was forbidden by its US-imposed Constitution to develop its armed forces, Japanese industry devoted itself to producing sophisticated tools and commodities for the exploding needs of techno-scientific expansion in the

non-Western world, and for individual consumption in Europe and the US. This technology was also the product of a social arrangement that seemed to synthesize US-style corporate capitalism, socialist state-subvention of industry, and quasi-feudal hierarchies of connection and obligation. The population of Japan, moreover, came to be seen as post-modern in its essence – enthusiastic about absorbing their traditional national culture into the new cybernetic/robotic/computer-driven regime of production and simulation. (This caricature prevented the US from perceiving the internal cultural frictions that eventually led to the debilitating stagnation of the Japanese economy.)

Japan became in many ways cyberpunk's model of the future, with the effect that Europe, the Soviet Union, and the US were depicted as parts of a single dying Western regime that could not successfully synthesize its humanistic ideologies and traditions with the demands of post-industrial production. Of course, there were many different cyberpunk styles, already in the first wave: Gibson's romanticism, Sterling's satirical realism, Cadigan's modernism, Shiner's pop-mysticism, Kadrey's and Jeter's gothicism, not to mention the diverse, distinctive styles of Moebius, Enki Bilal, David Cronenberg, Mamoru Oshii, Jack Womack, Richard Calder, the closely-related *tech noir* films like *Terminator* and *Alien*, and, of course, the seminal *Blade Runner*. Nonetheless, I think we can safely identify certain aspects of cyberpunk's aesthetic vision common to all its examples.

1) 'No Future' (the punk in cyberpunk) – the sense of a collapsed future, i.e., the replacement of progressive modernism's sense of constant material and social improvement by the sense of a failed project, leaving behind ruined infrastructures as its Ozymandian monuments;

2) the replacement of national sovereignty and class consciousness by technically sophisticated, but ethically savage, private, capitalist corporations and cartels, which dissolve social protections and rule of law, while encouraging the ruthless black-marketization of high technologies;

3) the attendant involution of all political power, and with it, the abandonment of all social centrality – hence the tolerance for poverty and decay of social institutions, law, traditional concepts of human dignity, and collective purpose;

4) the street finding its own uses for things – the proliferation of diverse fractal societies and cultures relatively free to construct their own social contracts under the radar of dominant institutions, politically powerless and hence unconstrained by normativity, but potentially destabilizing of the infrastructure of dominance because of their various technical 'hacks';

5) posthuman evolution – the morally unfettered proliferation of technologies (especially cybernetic and biotechnical prostheses) into areas traditionally considered sacrosanct, and, as a result, the gradual

transformation of all natural phenomena into artificial ones constructed by human or cybernetic agents.

These might well be considered the characteristics of post-modern Empire. It is my view that sf writers have always viewed their universe of discourse in terms of the imaginary world-model of techno-scientific Empire – Empire that is managed, sustained, justified, but also riven by simultaneously interlocking and competing technologies of social control and material expansion. Sf artists construct stories about why this Empire is desired, how it is achieved, how it is managed, how it corrupts (for corrupt it must), how it declines and falls, how it deals with competing claims to imperial sovereignty, or how it is resisted. The history of sf reflects the changing positions of different national audiences as they imagine themselves in a developing world-system constructed out of technology's second nature.

This intimate link between sf and Empire becomes increasingly explicit. In some respects, the conditions of techno-imperial power have been articulated better by sf than by traditional political theory. Hardt and Negri's model of Empire, to take the best example, has a distinctly science-fictional feel to it. Polybius, Machiavelli and Spinoza may hover in the background, but the Empire of the contemporary resembles the familiar world of cyberpunk and tech noir.

> Empire appears in the form of a very high-tech machine: it is virtual, built to control the marginal event, and organized to dominate and when necessary intervene in the breakdowns of the system (in line with the most advanced technologies of robotic production). (39)

> The imperial order is formed not only on the basis of its powers of accumulation and global extension, but also on the basis of its capacity to develop itself more deeply, to be reborn, and to extend itself throughout the biopolitical latticework of world society. (41)

> The empire's institutional structure is like a software program that carries a virus along with it, so that it is continually modulating and corrupting the institutional forms around it. (197-98)

This is the imperial Sprawl, ruled not through decrees and armies (well, mostly without armies) but managed through communications/control networks that distribute virtual power. This power is internalised by imperial citizens as surely as if they had chips embedded in their brains. In Empire,

subjectivity is multi-centred, produced through institutions that are terminally unstable, always breaking down. As the integrity of social institutions, such as schools, families, courts and prisons, fragments, and the once-clear subject positions associated with them weakens, the call for imperial comprehensiveness is strengthened, calling forth a comprehensive ideology, a finely distributed pragmatic myth of networked, globally interlocking power. This is the twenty-minutes into the future of Dick, Ballard, Gibson, Cadigan, and Oshii, where computerized communications operates 24/7, generating a mindscape of consuming subjects that feeds capitalist ideology directly into it. It perpetually breaks down and reconstructs human consciousness, as in a Cadigan novel, into provisional target-identities to which the nostalgic, utopian dream of wholeness can be sold and resold perpetually in variant, sometimes mutually contradictory forms, and which can be hired to convey its fictions of sovereignty ever deeper into the self that once imagined that it was itself sovereign. In this empire, there are infinite possibilities of projection, but only one reality.

Since contemporary imperial power does not emanate from one centre, but rather the cyberspatial ganglia of post-modern metropoli, resistance manifests itself in the 'the multitude's' daily refusal to follow commands. For Hardt and Negri revolution is neither possible nor desirable, since no class can act as the self-conscious agent of history. Freedom rests, as in Gibson's world, in finding one's own uses for things. In contrast with *sabotage*, the resistance strategy of national modernism, resistance under Empire consists of withdrawing consent, *desertion* (212). Even the greatest rebels are refuseniks, choosing to withdraw, leaving behind them, like the fused AIs in *Neuromancer* (1984), a world in which 'things are things' (270).

From this contemporary perspective, cyberpunk's cultural-historical role seems not to have diminished, but gained in stature. In its two major moments – the moment of its art in the early 80s, and the moment of its cultural diffusion in the late 80s and early 90s – cyberpunk mediated between the late modernist, highly ideological world view of the Cold War competition for hegemony, and the subsequent so-called 'End of History,' the intense campaign to saturate every aspect of social life with high-technologies of seduction and surveillance that characterized 'victorious' capitalist globalisation. Cyberpunk writers were the first to imagine life inside these wired techno-scientific metropoles, and the possibility that the humanistic verities, for which so many imperialist wars had been putatively fought, would vanish into thin air as human beings crossed into a world entirely of their own making, where even the condition of being human would be considered a debility, and ultimately 'fixable.' Cyberpunk writers were among the first to see that the diasporas, the pervasiveness of consumer technologies, computers' seemingly infinite ability to manipulate matter and perception, would dissolve traditional loyalties and historical affinities, that

the struggle for freedom would have to be defined all over again, in the face of the most subtle, global, and indeed self-chosen forms of control. They were often criticized: by cultural conservatives for their apparent delight in dissolution, and by progressives for their retrograde adherence to gender and racial stereotypes. I should know, since I criticized them, too – for their ambivalence and fatalism in the face of the technological juggernaut.

Now, however, I view them less as failed critics (which they never claimed to be), and more as the artists that they always did claim to be. Cyberpunk was an emphatically literary moment of mediation. While cyberpunks observed the powers of technology to transform everything, they remained stubbornly humanistic. Not, of course, in the sense of the bourgeois humanism so viscerally despised as the origin and motive of every logocentric, patriarchal and imperialistic project forced on the world by the modern West. But rather in the almost quaint insistence on the personhood of all the players in the Empire. It did not matter whether they were artificial or natural, organic or inorganic, in default mode or prosthetically enhanced, the cyberpunk writers refused to transform the problem of technological empire (they never did phrase it in these terms, in any case) into an abstract 'system' versus the individual. The dominant forces and the individual actors interpenetrated each other in an intensely existentialist vision of cyborg reality. In a sense, each character, no matter how strange or stupid, had some responsibility for the way things were, some genetic or cybernetic material they shared with the new governors. Even AIs and ROM-constructs exist in social worlds, with stakes in political, religious, and economic contests. In a sense, cyberpunk – at its best – merely depicted the expansion of the dilemmas of personhood dealing with contingency, mortality and agency, into new worlds.

In this light, cyberpunk was one of the first artistic movements to define techno-scientific empire as the condition of social being, an empire without fixed ideologies and politics, but also without a fixed fate. My favourite example of this is one of Bruce Sterling's best sketches, the rarely discussed 'The Compassionate, the Digital.'[4] It is narrated as if it were redaction of speeches given in 2113, celebrating the first successful journey through 'digital Ur-space' by an artificial intelligence construct. But this is not the only novum. The AI is actually a 'Programmed Believer' created in the future Global Umma of a Shiite world-government on the model of Khomeini's Revolutionary Islamic Republic. Sterling brilliantly captures the formulas and cadences of the ritual speech of the Iranian government, as it appears in English translations. The story is an example of the cyberpunks' commitment to depicting totalised futures imagined from diverse subject positions; in this case, on a Khomeini Continuum. There is powerful tension in this vision. Appearing in 1985, while the hostility between Khomeini's Iran and the US was at its height, the notion of a world-dominating Shiite

empire with trans-dimensional technological capabilities seemed both impossibly fanciful (and hence quasi-satirical), and also more subversive even than the vision of Soviet world-domination. 'The Compassionate, the Digital' is, from one perspective, a work of extreme orientalism – few things can be seen as more exotic, and more threatening to liberal Westerners, than a technologically superior and hegemonic theocratic Islam. At the same time, it is a work of great sympathy – for Sterling imagines that the drive for techno-science, the desire to expand the limits of the human condition, will not be suppressed by dogma, and will be driven by transcendental desires, no matter how they are expressed. The future will be a technological empire, even if its capital is Mecca. The heroic Digital Believer is no less heroic for being programmed to believe; and he and his kind are accorded equal status with human believers. The human faithful bask in the AIs' reflected glory. The penetration of 'ur-Space' is a fusion of science and mysticism, of human technology and admiration for divine creation. The story can be read in many ways: sarcastically, reverently, as a neutral science-fictional thought experiment, as a provocation, as a statement of tolerance, an estrangement of liberal techno-scientism, and so on. Two elements are firm: there is a techno-scientific empire (even if it is a most unlikely one), and there is an expansion of personhood.

It is safe to say that cyberpunk could not have survived into the 90s, to a great extent because of its own success in mediating the leap from late modernism to postmodernism. The 90s returned the US to global leadership, as Japan sank into a relentless recession, the Soviet empire collapsed, and multinational capitalism expanded throughout the world, via communications and transportation technologies that drive finance capital and human beings through its networks at unprecedented speed. The bubble of IT, which gave the US the appearance of unchallengeable wealth, inspired a confidence and (false) sense of security that restored the future – now not a distant goal for progress, but the infinite extension of present success. In this period, the technological empire seemed actually a benevolent entity, endlessly and mechanically creating wealth, energy, and 'liberty.' It followed 'laws' highly favourable to 'human' development – the ineluctable increase of bandwidth, of carrying-capacity, of memory, of processing speed. The West – especially the US – became identified (in its own mind, at least) with progress once again, but, having fended off socialism and quasi-Confucian corporate feudalism, with a sense of freedom, even ecstasy, that did not foster punk insouciance, let alone visions of collapsed futures.

It is telling that, with the collapse of this bubble, so efficiently aided by the atavistically nationalist-imperialist overreaching of the Bush regime and technologically sophisticated Islamic radicals, there has been a reinvocation of cyberpunk in films like *The Matrix*. Now, however, after waking up from the sleep of the 1990s, the Empire is seen as almost

irresistibly dominant, oppressive. If for the cyberpunks the struggle was always to find the personhood shared by human and program, and thus to leave room for the humanity of the posthuman, the Matrix tantalizes us with the possibility that there is nothing left for the human. After the Matrix...and after Iraq...we must see what empires sf describes for us.

Notes

[1] The main thesis of this introductory argument is elaborated in my 'SF and Empire,' *Science Fiction Studies* 30,2 (July 2002): 231-245. See also M Adas, *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance*, Cornell UP, Ithaca, 1989.
[2] H Arendt, *The Origins of Totalitarianism*, Meridian, NY, 1951, pp. 136-38.
[3] Cf. my 'Dis-Imagined Communities: Science Fiction and the Future of Nations,' in *Edging into the Future. Science Fiction and Contemporary Cultural Transformation*, U Pennsylvania Press, Philadelphia, 2002, pp. 217-237.
[4] B Sterling, 'The Compassionate, the Digital,' *Globalhead*, Bantam, NY, 1994 , pp. 65-72.

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Cyberpunk Politics: Hacking and Bricolage

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Abstract
When Bruce Sterling uses the word 'cyberpunk' in public, he has more than genre in mind. He is also talking about a near-utopian program for political and social change based in the discourses of cyberpunk fiction and (non-fictive) hacking. The larger paper from which this essay is extracted undertakes a preliminary mapping of cyberpunk politics and the matrix of scientific, literary and technocultural currents from which it emerges, with primary emphasis on Sterling as the movement's chief spokesman. Sterling's cyberpunk politics is a heady mix of anarcho-libertarian individualism, socialist-utopian communitarianism, punk attitude and geek know-how. I track these themes through Sterling and William Gibson, by way of explicating Sterling's notion of *bricolage* as a social technology closely connected to the practice of hacking. These readings foreground a look at recent events in the online subcultures of post-consumer mods, including the notorious Microsoft Xbox hack, which argue compellingly for the 'real-world' applicability of certain of cyberpunk's methods and agendas.

Key Words: Cyberpunk, hacking, bricolage, technoculture, Bruce Sterling.

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1. Cyberpunk R&D: Ultimate Technologies and End-Users

As a journalist and lecturer, cyberpunk hero Bruce Sterling has called for socially conscious professionals to involve themselves in debates that will determine not only the acceptable uses of emerging information technologies, but the ideological direction of a culture that increasingly defines and understands itself in terms of its relationship with networked data and mass media. As keynote speaker at a 1992 conference of the Library and Information Technology Association, he told an audience of 'cyberpunk librarians':

> The nature of our [late capitalist] society strongly affects the nature of our technology. It doesn't absolutely *determine* it […] But as a society we don't develop technologies to their ultimate ends […] We don't pursue ultimate technologies. Our technologies are actually designed and produced to optimize the financial return on investment. There's a big difference.[1]

Cyberpunk librarians, in Sterling's conceit, are those who challenge the profit-driven model of research and development by taking an active role in shaping the conception, development and application of technology toward progressive, democratic ends. Chief among these is the hacker ideal that information should be free and access to networks universal. Sterling claims Benjamin Franklin as a spiritual ancestor of the cyberpunks, arguing that users of digital information technology would do well to follow Franklin's model of nonprofit, working-class library cooperatives, in which users pool their data and share the administrative costs and responsibilities of maintaining the system.

Sterling's foregrounding of the often invisible meanings built into consumer technologies echoes Norbert Wiener's moralistic preoccupation with 'good' and 'bad' technologies (determined as such depending on whether they manifest helpful or harmful effects on ordinary folks), while his rhetoric positions cyberpunk values squarely against legal and ideological forces that seek to commodify and control information. It also hints that the key political battles of the information age will be fought on semiotic terrain. If cyberpunk fiction subscribes to an essentially postmodern worldview, in which all subjectivity is consumer subjectivity, confined to the exchange of empty signifiers reified as commodity, then political struggle must be, at some level, a struggle over the meaning of consumption. This essay explores the possibility of a praxis for cyberpunk politics from the standpoint of users of technology and consumers of mass culture.

In Sterling's cyberpunk ethic, this means the pursuit of 'ultimate technologies' adapted to concrete human needs, over and against the passive consumption of fetishised commodities generated by an economic system with its own set of abstract and often erratic needs. The tension between imperatives of use-value and exchange-value resonates in a well-known line from William Gibson: despite the best efforts of government regulators, corporate developers, security specialists and intellectual property lawyers, 'the street finds its own uses for things.'[2] For better or worse, information technology in particular is, by nature, irritatingly resistant to centralized control. In Gibson, the lively and autonomous black market plays a major role in the production not only of technologies themselves, but also of their meaning and value for users. *Neuromancer*'s Night City, a bustling red light district where the 'intricate dance of desire and commerce'[3] drives continuous innovation, illustrates:

> Night City was like a deranged experiment in social Darwinism, designed by a bored researcher who kept one thumb permanently on the fast-forward button […][4]

> […] he also saw a certain sense in the notion that burgeoning technologies require outlaw zones, that Night City wasn't there for its inhabitants, but as a deliberately unsupervised playground for technology itself.[5]

In a sense, then, cyberpunk-style politics is less concerned with who controls the means of technological production than with who can engineer the most effective applications for technological products. Gibson's paranoid bent prohibits him from embracing the black market scenario as one ripe with revolutionary potential – the unseen 'researchers' Case imagines monitoring the city will continue to haunt the novel, keeping the mood pessimistic throughout. Ever resistant to classification in binary utopian-dystopian terms, though, Gibson's vision of the technological outlaw zone affirms the premise that the field of changing and growing technologies will always be a site of contentious power struggles and irrepressible creative energies. Gibson's later fiction, notably the San Francisco trilogy, is more hopeful about the possibility of positive change resulting from such battles.

2. Bricolage: Semiotic Warfare, Symbiosis and Synthesis

In classic cyberpunk, the narrative often turns on the use of technology in essentially 'unauthorized' ways. Objects taken from one semiotic context (here, the dominant paradigm of industrial research and design) are inserted, perversely, in other contexts in which their practical and cultural meanings are utterly transformed. This practice, dubbed *bricolage* by structuralist anthropology, is central to Dick Hebdige's study of British youth cultures in the 1970s. Characterized by improvisational technique and an emphasis on the concrete over the abstract, bricolage devises 'systems of connections between things which perfectly equip their users to 'think' their own world.'[6]

Using bricolage, Hebdige's London punks could reconfigure manufactured reality and create their own semiotic maps of their environment, codes that helped to define and fortify the community against a hostile parent culture. Meanwhile, punk style waged 'semiotic guerilla warfare' on middle class complacency by profaning its most sacred objects – manufactured goods.

> The most unremarkable and inappropriate items – a pin, a plastic clothes peg, a television component, a razor blade, a tampon – could be brought within the province of punk (un)fashion. Anything within or without reason could be turned into […] 'confrontation dressing' so long as the rupture between 'natural' and constructed context was clearly visible […][7]

Cyberpunk fiction is markedly sympathetic to the cause of semiotic warfare Hebdige describes, but 'bricolage' means something slightly different for Bruce Sterling. Hebdige is interested in bricolage in style as a means of communication within and among subcultures. In the realm of high technology, though, the bricoleur's craft lends itself to practical applications as well as symbolic ones. Sterling's short story 'Green Days in Brunei' is, among other things, an exploration of the practice of bricolage not only as a response to capital's stranglehold on production and the meaning of commodity, but as a social technology with utopian implications.

The story concerns Turner Choi, a Chinese-Canadian software engineer contracted by the Sultanate of Brunei to rebuild its small and woefully obsolete robotic shipbuilding industry, for reasons unknown until the end of the story. Sterling's near-future Brunei is run by an ostensibly neoluddite Green party that has carved itself a niche in the world economy by imposing a strict (though by no means airtight) quarantine on electronic communication with the outside world: no Internet, no satellite, no broadcast, no telephone. The Bruneians get by on communal labor and the capital reserves of international tax refugees who flock there to escape the global 'Information Order.'

The unlikely symbiosis of a leftist ruling party, a figurehead aristocracy, and a small population of wealthy Westerners is one level at which the doctrine of bricolage works to afford Sterling's Bruneians some degree of self-governance and security, despite its total lack of military, economic or industrial power. The principle also underlies the Sultanate's plans for its outmoded tech infrastructure. A senior official explains to the reluctant protagonist:

> 'You're a bricoleur, Chong. You can make do. You can retrofit. That's what bricolage is – it's using the clutter and rubble to make something worth having […] We've got nothing but the junk the West conned us into buying, every last bloody Coke can and two-car garage. And now we have to live in the rubble, and make it a community.'[8]

A similar theme recurs throughout Gibson's San Francisco novels. Much of the action centers on an earthquake-ravaged Golden Gate Bridge spontaneously taken over by an army of homeless squatters, who build their own vital and self-sustaining community out of the city's refuse. Bristling with shipping-container shanties and shops improvised from the debris of abandoned construction sites, and cemented by an informal but deeply rooted community ethic, 'The Bridge' is perhaps the closest thing in Gibson's fiction to a functional utopian society.

'Green Days in Brunei' makes an explicit connection between bricolage – both as a technological practice and as a philosophy of life – and the practice of hacking. As Choi faces the problem of obtaining technical documentation and software needed to resurrect the antique robots without communicating with the outside world, it becomes clear that he will have to break some rules and devise some ingenious strategies if he is to succeed. The solution involves an improvised (and illegal) satellite uplink and a video phone call to Choi's brother in Vancouver. The episode portrays seemingly impossible problems solved by Choi's bricoleurlike knack for spotting counterintuitive, nonlinear shortcuts:

> 'I need some modem software,' Turner said […] 'Could you get it off the old Hayes in my room?'
> 'If you don't have a modem protocol, how can I send you a program?' Georgie said.
> 'Print it out and hold it up to the screen,' Turner explained presently. 'I'll record it and type it up later by hand.'
> 'That's clever,' said Georgie. 'You engineers.'

The bricoleur's method, for Sterling, is to 'make do' with what's available and remain constantly awake to the possibilities of unintended applications and simple, even low-tech solutions. Hackers, whose talent consists of more than just raw coding skill, are above all expert bricoleurs. Lacking authorized front-door access to a system, the hacker's secret weapon is a resourcefulness that operates independently of all the procedural, economic and psychological directives that constrict ordinary users. Confronting complex problems means bringing together disparate elements by thinking creatively and unconventionally. One must have the imaginative drive to tweak and redeploy existing hardware and software to one's own particular needs – to 'retrofit.'

The accounts of real-life hackers consistently emphasize how sometimes the most effective techniques are also the simplest: dumpster-diving for documents, guessing at likely passwords, or simply paying attention when others are not. Celebrity hacker Adrian Lamo, a homeless 21-year-old who squats in empty buildings, scouts potential shelters by 'randomly trying doorknobs until he found one that rattled'.[9] The doorknob-rattling method is also 'a pretty good metaphor,' Lamo says, for his minimalist approach to hacking, which typically calls for nothing more involved than a web browser, a Kinko's Internet connection, and an eye for other people's careless mistakes. David Tetzlaff points out the indispensability of 'human engineering' – a knack for finessing people into divulging key information – in the hacker's craft.[10] These approaches to problem-solving all emphasize the concrete: pursuing specific and immediate end-user applications, deploying available

tools in the most effective ways, and seeking out not the shortest distance between two points, but rather the *most direct possible route* from A to B.

3. The Commodity Front: Geeks with Soldering Irons vs. Command-Control Consumption

Recently, resourceful hackers transformed the spectacularly worthless CueCat UPC scanner into a cheap and useful tool for reading barcode. Thousands of the handheld devices were distributed free of charge in 2000 by a company called Digital Convergence. The idea was that users would connect the CueCat to their PC's and use it to scan barcodes printed on consumables from cereal boxes to magazines. The user's web browser would then be automatically directed to product information on the manufacturer's website: point your CueCat at a jar of laxative and you're whisked away to Metamucil.com. Meanwhile, Digital Convergence is tracking your product-scanning activity and compiling reams of consumer data for sale to marketers.

Investors had hoped the value of the data they would eventually collect would recoup their production and distribution costs, but hackers had a better idea. Anyone with a soldering iron and a web browser could learn how to disable the CueCat's proprietary functions, rendering it useless for market-research purposes, and essentially converting it to an ordinary supermarket-variety barcode scanner of the kind that might cost hundreds of dollars on the retail market. The company folded eventually, but not before threatening to shut down sites that published instructions for 'declawing your CueCat.' The legal premise was dubious, and the hacking community's counterargument was correspondingly to-the-point: if you give me an item, it becomes my property. Don't I have the right to modify my property and use it as I please?

Microsoft took a similar risk when it introduced the Xbox gaming system. The Xbox is essentially a standalone PC optimized for networked game play, containing nearly all the makings of a desktop computer but configured to function only as a game console. Microsoft chose to sell their superior technology at a loss, in hopes that the low price of the hardware would lure gamers away from competitors' more established platforms, and help to build a strong customer base for Xbox game titles. It wasn't long before hobbyists found ways to modify the box so that it would behave like a serviceable 733 Mhz PC that could all but replace your $1100 Dell at a bargain price of $299. Microsoft was not amused. After trying unsuccessfully to thwart hackers with a new and supposedly more secure design, Microsoft sent its lawyers after overseas manufacturers of mod chips that made the hack possible. As with the CueCat case, Microsoft sought to prevent would-be modders from accessing websites where information and materials could be obtained.

Nevertheless, Microsoft's troubles have been compounded by the activities of a thriving web-based community of Xbox hackers, who use sites

like xboxhacker.net and the Xbox Linux Team page, as well as more general geek-culture resources such as Slashdot.org to share information and support. Users of these sites generally consider themselves hobbyists who pursue hacking as a strictly not-for-profit, intellectual exercise: it's not about making money, it's rarely about politics, and it's never about hurting people. By bringing their own set of (noncommercial and ostensibly apolitical) values into a sphere dominated by market logics and the profit motive – and getting away with it – white hat hackers destabilize certain longstanding assumptions about the designer-user relationship and make the case for a future where standardized design takes a backseat to the specialized demands of end users. Moreover, they highlight the ineffectuality of litigation-based solutions to a problem defined by the diffuse, decentralized, informal and above all communal structure of the hacking community (and the web in general, for that matter).

The peculiar dynamics of cases like CueCat and Xbox indicate that twentieth-century notions of authorship and intellectual property are in a precarious position at a time when users of technology have nearly as much say as designers in how the products they consume will be used. When companies fight to control end-use *after* the transfer of ownership is not the integrity or the market value of the product itself, but the ability of manufacturers to front-load the product with meanings that will authorize some types of activities while excluding others. When even relatively unskilled hackers have the ability to effectively rewrite authorial intention, how can the 'authors' of CueCat and Xbox retain any meaningful authority in their relationship with consumers? Will blocking would-be hackers' access to how-to information on the web prove a more effective strategy?

Either way, it seems unlikely that Microsoft will succeed in keeping a lid on Xbox mods in the long term, just as the combined legal and financial might of the record industry managed to win the Napster battle while apparently losing the larger war against digital piracy. The rhetoric of war, in fact, is a defining feature of a conflict in which the distinction between 'us' and 'them' is, increasingly, clearly marked. Sterling, himself somewhat given to bellicose metaphors, sees a major historical showdown taking shape:

> Once [ideas] start actually challenging the world, there's smoke in the air and blood on the floor. You cybernetic LITA guys are marching toward blood on the floor. It's cultural struggle, political struggle, legal struggle. Extending the public right-to-know into cyberspace will be a mighty battle. It's an old war […] But the terrain of cyberspace is new terrain. I think that ground will have to be won all over again, megabyte by megabyte.[11]

The cyberpunk crusade against authoritarianism and market determinism is fought by hackers on several fronts: the symbolic, where performance of proscribed acts and recoding of consumption signify dissent and little more; and the practical, where the same acts are undertaken toward immediate human needs, in wilful though not necessarily overtly political defiance of governing ideologies. Within these categories, the case could be made, we are still at a fairly superficial level of efficacy. Cultures of hacking and piracy may provide philosophical and even utilitarian frameworks for resistance, but rebellious posturing and acquisitive self-interest rationalized as protest are, as such, no basis for a program of social change. From this viewpoint, it is tempting to dismiss Sterling's fiery rhetoric as so much self-promotional confrontation dressing. Do all these cyberpunk shenanigans accomplish anything concrete, other than keeping a few hundred lawyers busy? David Tetzlaff, in his exploration of the rhetoric of 'warez ethics' among file-sharing pirates and crackers, suggests a third possibility. Tetzlaff argues that unauthorized activities like software piracy enact an ideological/epistemological struggle over contested terms (property, theft, etc.), and that negotiating the legal and ethical pitfalls of digital living may be useful 'training' for survival in an increasingly authoritarian post-fordist labor culture.[12]

By forcing questions that undermine older assumptions about ownership and control, hackers contend for control of the social meaning and value of information. Cyberpunk holds out the promise that, though commodification and consumption are facts of an increasingly digital life, they no longer need confine us to outmoded economic and legal structures. The hierarchical model of one-way, centralized power relations can be resisted, provided one has the right tools.

Notes

[1] B Sterling, 'Cyberpunk Librarians,' *Thinking Robots, an Aware Internet, and Cyberpunk Librarians*, Library and Information Technology Association, Chicago, 1992, p. 25.
[2] W Gibson, quoted in B Sterling (ed), *Mirrorshades: The Cyberpunk Anthology*, Arbor House, New York, 1986, p. xii.
[3] W Gibson, *Neuromancer*, Ace Books, New York, 1984, p. 10.
[4] Ibid., 7.
[5] Ibid., 11.
[6] D Hebdige, *Subculture: The Meaning of Style*, Methuen, London, 1979, p. 103.
[7] Ibid., 106.
[8] B Sterling, *Crystal Express*, Penguin, New York, 1990, p. 306.

[9] N Schactman, 'He Hacks by Day and Squats by Night,' *Wired*, 6, March 2002.
[10] D Tetzlaff, 'Yo-Ho-Ho and a Server of Warez,' *The World Wide Web and Contemporary Cultural Theory*, Routledge, New York & London, UK, 2000, p. 107.
[11] Sterling, op. cit. 1992, 30.
[12] ibid., p. 119.

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PART II

Imaginings of Future (Cyber) Worlds

Glimpses of Humanity in Greg Egan's Science Fiction

Sylvie Allouche

Abstract
Greg Egan, born in Perth (Australia) in 1961, is one of the most prominent and innovative science fiction writers since the beginning of the 1990s. Indeed, his familiarity with mathematics and his seemingly universal curiosity allows him to deal convincingly with as various and as difficult questions as virtuality, the theory of evolution or quantum physics. The richness of his scientific background is so impressive that, as a joke on rec.arts.sf.written, Paul Clarke proposed Clarke's Fourth Law, which says : 'Any sufficiently advanced technology becomes a Greg Egan story.' But if Greg Egan, out of his desire to reach a high level of scientific verisimilitude in his stories, is often considered a hard science writer, the fact remains that his imaginary technological inventions always aim at a better understanding of what it means to be (and stay) human, with some recurrent issues about immortality, the role played by beliefs in one's life and the nature of free will. It will not be possible in this paper to provide a complete review of the ways Greg Egan deals with the various issues raised by the conference because his works, which are already numerous, usually present a high density of speculation. I will have to either demonstrate, with a few examples, how the author's speculative imagination explores many of these questions with great skill or tackle one particular problem and examine as many aspects of it as possible.

Key Words: Vituality, technics, Asimov, *Axiomatic*, Greg Egan.

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Since the birth of cybernetics and molecular biology, the progress of science and technology seems to have taken a new face: from now on it appears possible for human beings not only to intervene on external nature, as they have done from the emergence of agriculture to the control of atomic energy, but also to intervene directly on themselves. Facing the extraordinary potentialities of new sciences and technics which may be foreseen since the end of World War II, the question raised is not only about the world humanity wants to live in, but also about the kind of persons human beings want to be in the future.

Science fiction writers encounter these questions and problems and explore them with their own method of speculative fiction. By imagining possibilities at the limits of contemporary sciences and technics, they tackle these questions on the nature of human beings and their desires by fictional

experiments. Of course, this is not the case of all science fiction, but it is certainly one of its main regions. And in this area, Greg Egan appears to be a particularly relevant author. Born in Perth (Australia) in 1961, he is indeed one of the most prominent and innovative science fiction writers since the beginning of the 1990s. He combines a dazzling speculative imagination with a meticulous care for scientific verisimilitude, yet he never tells his stories for the sole sake of virtuosity. His goal is always to achieve a better understanding of what it means to be (and stay) human. But an issue is raised by the word 'humanity'. It is not the same thing to be human and to be humane. As 'human' refers to a certain living species as opposed to animals, divine beings, or machines, 'humane' on the contrary refers to a set a characteristics like kindness, mercy, sympathy, etc. Human beings may be humane but they may also be inhumane. What is then the relationship between these two notions? And what is the most valuable, being human or humane? The dialectics between humanity as humanness and humanity as humaneness is a recurring theme of science fiction. In Asimov's robots stories, one of the main issues is whether positronic robots, bound as they are by the laws of robotics, are not more humane than human beings? This issue is also raised in the movie *Blade Runner* directed by Ridley Scott. Yet the question brought up in most of Greg Egan's stories is not about non-human beings and human ones. His focus remains on human beings only, and imagining all sorts of modifications, he asks questions about the humanity of the human beings: what can be changed and still leave them human? Under what conditions do human beings remain humane? Is there a criterion of humanity?

Greg Egan imagines that man will soon develop technics which will allow him to radically modify his being-in-the-world. Man could be soon in position to change all that natural evolution has elaborated in millions of years, by operations that take a few minutes or a few hours. One natural constraint imposed on the human species is that only women can bear children. In 'The Cutie', Greg Egan evokes the possibility that one day men could also do it. Greg Egan imagines also in *Distress* that people can choose to migrate from one gender to another. But it is not only a matter of switching from male to female or the contrary, for there are actually seven different genders: Asex ('Asex was really nothing but an umbrella term for a broad group of philosophies, styles of dress, cosmetic-surgical changes, and deep-biological alterations.'[1]); umale & ufem ('the whole point of being umale is to distance yourself from the perceived weaknesses of contemporary natural males'[2]); ifem, imale; en-male & en-fem.

The author also imagines in 'Chaff' that the human-world interface could be altered through retinal symbionts so as to see in infra-red light or body symbionts with all kind of purposes, for instance scent camouflage. He deals also with the possibility of modifying the human genetic code. Ned

Landers in *Distress* transforms his whole metabolism so as to survive in any conditions. But he has a more ambitious goal:

> DNA and RNA can be manufactured with totally novel chemistry – with non-standard base pairs to take the place of the normal ones. A new alphabet for the genetic code: instead of guanine with cytosine, adenine and thymine – instead of G with C, A with T – you can have X with Y, W with Z. […] In the long term, of course, I'm aiming to modify the stem cells which produce my sperm. My wife Carol has already begun a program of ova collection. […] And our children will be a new species of life. More than a new species – a whole new kingdom.[3]

Cloning also, in 'The Caress' or 'The Extra', or Copying (see below) may constitute means to ensure one's immortality. But if we are able one day to change our perception of the world, if we can escape the division of sexes or death, will the human still be the human?

Greg Egan pictures a humanity who has an almost infinite power on itself but this humanity also strives to keep its life meaningful. Can this hope be fulfilled when all in man can be changed including his beliefs and desires? Human beings are moved by a variety of desires which may sometimes come into conflict with one another. The products that Greg Egan imagines allow individuals to strengthen some of them and remove uncertainty. For indecision is, at the same time, the greatest evil and the greatest good: the source of intelligence, it is also the main cause of moral suffering. That is why when an individual can free himself from doubt, he usually shows great relief. The dialectics of uncertainty appear in full light with the idea of axiomatic implants. In 'Axiomatic', the first person narrator Mark Carver wants to kill the man responsible for the death of his wife, but his desire is not strong enough to overcome his moral scruples. Two forces are struggling inside him: the longing for revenge and the inner conviction that it is wrong to kill a human being, though there is from the beginning a slight lack of balance in favour of retribution. Mark Carver has already prepared everything for his revenge (he knows where the murderer Patrick Anderson lives, he has bought a gun and trained himself to shoot,), but only one thing is lacking: to be able to think that it is not so wrong to kill someone. Greg Egan assumes, as in most of his texts, that morality, as well as all the characteristics of the human mind, is just a result of some function of the brain, so all that is needed to get rid of this scruple is to rewire the brain. Mark Carver achieves this by inserting the axiomatic implant into his nose. Now nothing can prevent him from taking his revenge.

While Mark Carver in 'Axiomatic' wilfully rewires his brain to put an end to his indecision, in the novel *Quarantine*, Nick Stavrianos has it rewired against his will. The effect is that he is utterly convinced that all which matters now for him is the Ensemble. It may seem quite appalling to have one's beliefs rewired, especially when they concern the ultimate goal of one's life. But Nick takes this quite philosophically. Whereas he is now intimately persuaded that the most important thing in his life is to achieve the goals of the Ensemble, at the same time he is perfectly aware that this conviction has been imposed on him and is not the result of his own personal evolution. But above all, Nick is happy to have a clear and precise goal in his life at last: 'I want to serve the Ensemble, more than I've ever wanted anything before. All I have to do is find a way to reconcile this with my sense of who I am.'[4] A complex dialectics is set up between Nick and his loyalty mod. If the loyalty itself is never questioned, it cannot prevent some paradoxes from arising: 'I have no idea what the Ensemble is – except that it's the most important thing in my life.'[5] 'Loyalty mods are obscene – but the Ensemble is doing important work, they had to protect themselves, and I wouldn't have wanted it any other way.'[6] Nick even comes to think that it is a normal function of the mod to give rise to contradictions that make his owner reflect on it:

> Presumably, the advantages of allowing me to understand what's happened are seen to outweigh any conflict between the sincerity of my feelings and my awareness of their origins.[7]

But this is not the end of paradoxes: some time later, another character, Dr Lui, who also has a loyalty mod suggests to Nick that his loyalty to the Ensemble does not involve loyalty to his direct superiors. Why? Because only those who have a loyalty mod are really reliable since they are the only ones to unquestionably serve the Ensemble whereas the others do it according to their own private interests. For this reason 'the task of discerning the interests of the Ensemble must fall to *us*.'[8] concludes Dr Lui. This is not yet freedom, but as Nick puts it, '[w]elcome to the Reformation.'[9]

In 'Chaff', Greg Egan takes another step in exploring the paradoxes raised by the imaginary technics of brain-rewiring. He stages a biochemist, Guillermo Largo, who has created some biochemical agents, the Grey Knights, that can modify at will any structure of the brain. He explains to the narrator (who has no name in the story but whom we can call Marlowe for commodity) the benefit derived from his new biotechnology:

> For most people, navigating in their own psyche is like wandering in circles through a maze. […] *Grey Knights*

> allow you to reshape the entire maze, at will […] They let you control *exactly who you are.*[10]

Guillermo Largo points out that the brain has 'about ten-to-the-power-of-ten-million'[11] ways of being wired. 'But do you know what Grey Knights do to that number?'[12] he asks.

> They multiply it by the same again. They grant the part of us that was fixed, that was tied to 'human nature', the chance to be as different from person to person as a lifetime's worth of memories. [13]

Half-convinced by the arguments of Largo who has infected him with Grey Knights, Marlowe reflects on the man he really wants to be. Compared to Mark Carver in 'Axiomatic' he is on the other side of the limit: Whereas Mark Carver was delayed in having his revenge by moral scruple, Marlowe, for his part, has overcome all scruples a long time ago, but the deaths he is responsible for keep on tormenting him and he would prefer for his own peace of mind to accept his acts without any more doubts: 'All I had to do in order to remain unscathed was to choose that fate. To wish only to be exactly who I was: a killer.'[14]

Another source of reflection on self-manipulation comes from the idea that we could scan human brains and create perfect digital Copies of persons. Instead of disappearing forever when they die, people could then choose to survive as Copies. This assumption made, Greg Egan imagines different applications of this technology as well as the problems that could appear. He stages several characters who consider that living as a Copy is not worthwhile. The novel *Permutation City* begins with Paul Durham waking up. At first, everything seems completely normal, but before long, a doubt creeps into Paul's mind until the shock of realization: he has made a Copy of himself. But the imitation is so accurate that he is unable to tell for sure whether he is the flesh-and-blood Paul Durham or his Copy. To check this, he says the password: ''Abulafia' – and his last faint of hope vanished, as a black-on-white square about a meter wide, covered in icons, appeared in midair in front of him.'[15] 'What he'd done to himself was insane – and had to be undone, as swiftly and painlessly as possible.'[16] Even though he is, in the depths of his consciousness, unable to discern any difference between his being-in-the-real-world and his being-in-the-virtual-world, Paul Durham regards his virtual-being-in-the-world as false and not better than death.

Greg Egan also stages characters who do not even want to try scanning: Maria's mother in *Permutation City* is one of these people. The idea is still too strange for her. Although she recognizes that Copies are intelligent beings, she does not accept that they are the same persons as the original flesh-and-blood ones. And having her brain scanned would not help

her in any way to reconcile herself with the idea of death. Loraine, David's wife in the short story 'A Kidnapping' presents the same arguments:

> I don't want to be imitated by a computer after I'm dead. What use would that be to *me*? […] I'm as frightened of death as anyone – but being *scanned* wouldn't make me feel any better.[17]

In fact, as the story goes on, we happen to learn that a Loraine has been scanned in spite of her wishes. The representation that David had of her in his mind when he was scanned has turned out to be consistent enough to give birth to a convincing imitation of Loraine. It remains uncertain whether this imitation is really a person or not: is she really able to think and feel? Or is she just an empty ghost who vividly seems to be someone? But how to discriminate between a real person and a fake one in a virtual world? How do we do it in the real one? As David puts it: 'Am I *no one*? Are you *no one*? Because that's all *we* can ever have of each other: an imitation, a Copy. All we can know about are the portraits of each other inside our own skulls.'[18]

We are now moving to a theme Greg Egan deals with on several occasions, namely the problem of the incomplete imitation of consciousness. If we assume that it is possible to produce a computable model of a consciousness, the question is at what stage of development does this consciousness appear? When a Copy is built, there must be a moment when the consciousness of this Copy appears in the computer even though the whole person is not yet achieved. In 'Transition Dreams', the first person narrator (we will call him Small) is settling the last details of a scanning contract with the Gleisner Corporation. Caroline Bausch, representative of the Corporation, explains that the software model which will be run to create his Copy will produce some transition dreams that he will not remember when he wakes up as a Copy. The same day, while going home, Small has a stroke. When taken over by an orderly, he asks to be immediately scanned since he has just signed the contracts, but the orderly refuses and explains:

> Do you think there could *ever* be one coherent, conscious self, enduring through time – without a billion fragmentary minds forming and dying all around it? […] What do you think? You were Mr Big? The one in a billion ? The one on top?[19]

Small thus understands that he is already in a transition dream and that he is going to die for he is just an intermediary stage towards the unique Copy. And indeed, his memories have already changed: the woman he

thought to be his wife was in fact his teacher in primary school. And other details do not fit:

> Where do I live, then?
> What did I do?
> Who did I marry?[20]

Having skimmed through a certain number of Greg Egan stories, we may stop and try to answer the question raised above: what does it mean to be and stay human if human beings succeed one day in mastering different kinds of self-manipulation? Is it possible to extract a definition of humanity from these tales? To try to do so may appear quite reckless in so far as the writer himself does not claim to be building any coherent philosophical definition of humanity but is only telling stories. Wouldn't humanity be defined in quite different or even contradictory ways from one story to another? That is very likely, and my point is precisely that this variation is a good way to reach the definition we are looking for.

From the first modifications considered, we can certainly conclude that even if a man is one day able to bear a child or if a human is neither a man nor a woman, both of them would still be human beings. These manipulations would certainly alter the human condition, but we must assume that humanity is not reducible to its condition, that is the circumstantial contingencies of its material existence. Similarly, even if we are given the ability to see infra-red light, we may suppose that this will not affect our humanity in any essential way, but only the modality of our being-in-the-world. What of the prospect of changing the human genome so thoroughly as to create a new kingdom as Ned Landers claims to do in *Distress*? Is it this ambition which makes him desert humanity or the fact that he was likely to plan the extermination of mankind? Once again, what is really important in defining humanity appears to be other than its basic materials. So what is it? Maybe it is the awareness of death? Knowing that we will have to die one day is it what makes us real human beings? Some people have upheld this idea, but an immortal human being does not sound like a contradiction and, actually many immortal characters whom Greg Egan describes act completely like real human beings. Where do Daniel Gray (in 'The Extra') or Andreas Lindhquist (in 'the Caress') really show proof of their inhumanity? In the fact that they wish to live longer or in the fact that with this goal in view they have abandoned all respect for the life of other human beings? It appears that when the modification regards only the human relation to the world, nothing essential to humanity is changed. The only thing that can be said is that these powers might, as any other technics, give free rein to the inhumaneness of some individuals.

But can the same be said when it comes to the alteration of personal identity? The question can be first asked about what Greg Egan describes as priming. Primed human beings do not seem to be human anymore. But as Dan Segel puts it in 'The Caress', 'Yes, we're freaks; but if we have a problem, it's that we're still far too human.'[21]

It means that still being human is the problem – but we can understand the sentence in another way: 'Having a problem – having any problem is a way to make sure that we're still human.' Humanity could then be characterized by the ability 'to have a problem'. Do animals, gods or machines have problems? Let us test this criterion on the various instances of brain-rewiring we have considered. What about the loyalty mod in *Quarantine*? It is certainly inhumane to impose loyalty mods on people, especially without their consent, but is Nick for all that less human because of his sudden unquestionable loyalty to the Ensemble? If we hold on to our criterion, Nick is still human in so far as he keeps on wondering about himself and his loyalty mod. He still has a problem.

Can we say the same thing about Mark Carver in 'Axiomatic'? Is Mark Carver still human? Or should we rather ask *when* is Mark Carver still human? As long as he is hesitating between having his revenge and respecting the sanctity of human life, we can consider that he is still human. But when he is affected by the axiomatic implant, we may assume, applying our criterion, that he is not human anymore, having renounced all his inner contradictions: 'Being true to myself would have meant living with all my contradictory urges, suffering the multitude of voices in my head, accepting confusion and doubt. It's too late for that now.'[22] According to our criterion, Mark Carver is not human anymore when he is under the effect of the axiomatic implant, having given up all doubts and reached full joy and peace. Does this mean that human beings cannot get along without suffering and that happiness is not made for them?

If we now turn our attention to the example of Guillermo Largo and Marlowe, it seems that the same kind of conclusion can be drawn: as long as they are tormented by indecision and uncertainties, they undoubtedly prove themselves to be human. But as soon as they have the opportunity to make use of Grey Knights to eliminate their inner contradictions and keep their stronger traits of personality, they reach happiness, but at the same time they renounce their humanity. The same can be said about Copies: as long as they accept to live with their contradictions and doubts, they still belong to humanity. When they decide to give them up, as Peer does for instance, they become something other than mere human beings.

Thus examining whether a person still 'has a problem' would be a good key for deciding on her remaining humanity. But this criterion might be too general. Or one may wonder whether a definition of humanity is really what Greg Egan helps us discover. Is the criterion of inhumanness so

important, when people can be inhumane while still being human? Trying to find a criterion for humanity as humanness, as enthralling as it is, may happen to be discussing futilities (In French we say discussing the sex of the angels) as long as the definition of humanity dwells in its plasticity. What really matters about humanity may be not to decide whether someone is still human but whether someone is still humane. The simple possibility of such a question about an individual pleads for his humanity as humanness, as it would be absurd to discuss the humaneness of simple machines or animals. Then, whatever body modifications, whatever basic components, material or computable, whatever inner contradictions, perhaps humanity should be decided on according to humaneness only.

Though I am not completely satisfied with the two criteria of humanity I have defined namely 'having a problem' and humaneness, I will stop here. I do not doubt their value, but cases remain that do not fit. I hope that these glimpses of a future humanity have at least persuaded you to read the fascinating books of Greg Egan.

Notes

[1] Egan, 1996d, 35-36.
[2] Ibid., 36.
[3] Ibid., 19-21.
[4] Egan, 1995a, 94.
[5] Ibid., 87.
[6] Ibid., 94.
[7] Ibid., 93.
[8] Ibid., 145.
[9] Ibid., 147.
[10] Egan, 1999b, 21-22.
[11] Ibid., 23.
[12] Ibid.
[13] Ibid.
[14] Ibid., 24.
[15] Egan, 1995b, 4.
[16] Ibid., 2.
[17] Egan, 1996e, 190-191.
[18] Ibid., 199.
[19] Egan, 1999a, 154-155.
[20] Ibid., 155.
[21] Egan, 1996b, 70.

[22] Egan, 1996c, 135.

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Freedom and Power: Cyberdemocracy in the Future Worlds of Robert A. Heinlein

Dena Hurst

Abstract
'Freedom!' Their Charity Snorted [speaking to savage and slave, Hugh Farnham]. 'A concept without a referent, like 'ghosts.' Meaningless. Hugh, you should study semantics. Modern semantics, I mean…We are all free – to walk our appointed paths. Just as a stone is free to fall when you toss it into the air. No one is free in the abstract meaning you give to the word.[1] This is the age-old philosophical dilemma, succinctly stated in this passage from *Farnham's Freehold*, that permeates Heinlein's future worlds: individual freedom versus societal obligations, the inevitable abuse of power within societies, and the manipulation of language to give new authority to outmoded ideologies. The worlds that Heinlein created were caricatures of the world in which he lived, of a democracy that in varying degrees manifested almost every conceivable flaw pointed out by philosophers from Aristotle to Tocqueville and Chomsky. Heinlein's future worlds are invariably democracies that, through catastrophe or evolution, have been carried to the limits of one form of degeneration or another. The reader finds worlds in which discrimination, slavery, exploitation, corruption and totalitarianism are the norm, and are justified by leaders and scholars using the same arguments that political philosophers have historically used to assert the virtues of democracy – arguments of equity, justice, and moral right, all played out in Wittgensteinian language games.

Key Words: Chomsky, Robert A. Heinlein, cyberdemocracy, future worlds, cyberculture, freedom.

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'The greatest invention of mankind is government. It is also the hardest of all.'[2] Its difficulties lie in the contradiction rooted in early liberal democratic theory; man is indeed born free, but everywhere finds himself in chains of his own creation. The establishment of a society, with its rules and mores, places restrictions on a person's thoughts, deeds, and desires. The scope of these restrictions is determined by the ends of the society and the means by which they are to be achieved. As the ultimate end of any society is typically continued survival, there is a compelling need for such to be the primary focus of its citizenry – all must work together for continued collective existence.

This uniformity in purpose requires conformity in mindset, and therein lies the rub. How can an individual be said to be free when personal freedoms are subordinated to communal obligations?

Heinlein's plots usually centre around free thinkers who strive to live on their own terms in societies where overt expressions of individuality are at best discouraged, more often than not prohibited. Strict hierarchies are the norm, privileges – including participation in government matters, access to education, and use of technology – are granted according to status; status or function are denoted by modes of dress or speech, living conditions, and responsibilities. The future worlds vary from worldwide federations to slavocracies to ecclesiastical and secular monarchies, from absolute tyrannies to benevolent, patriarchal dictatorships, all representative of extreme political structures in which norms, customs, and rituals are rigidly enforced. Against these backdrops, Heinlein delivered protagonists, usually male, often middle-aged (a bit of an autobiographical bent, perhaps), and sometimes rebellious, but always free thinkers. The philosophical conundrum of individual freedom versus the obligations of collective living was expressed in the antagonistic relationship between the hero and the society in which the hero found himself.

For Heinlein, then, to borrow a phrase, 'Liberty is, to live upon one's own Terms.'[3] It means that an individual is not subject to any rules except those he or she makes or chooses to follow. But the choice must be one that is made freely. As long as the mind is free to think and the will free to make choices, an individual is free under Heinlein's conception. 'You can't enslave a free man. Only person can do that to a man is himself. No, sir – you can't enslave a free man. The most you can do is kill him.'[4]

Nonetheless,

> Slavery has often existed where slaves were never bought and sold, but simply inherited […] being a slave means having someone as your master, with no hope of changing it. You slaves who call yourselves the 'People' can't even hope for manumission.[5]

The freedom offered by the leaders of Heinlein's future worlds is, conversely, a rather Hobbesian version. The citizens are considered free in that there are no physical constraints on their movements, just as a rock, as pointed out by Their Charity, is free to fall; there is nothing to prevent it from following the course dictated by natural laws, no impediment to break the fall that gravity commands must occur. Similarly, rules, laws, and protocols of society – and protocols can be as confining as any formalized laws – dictate the natural course of citizens, as the laws of nature govern the universe at large.

'Customs tell a man who he is, where he belongs, what he must do. Better illogical customs than none; men cannot live together without them.'[6]

In a rather paradoxical turn of logic, the more stringent a society's laws the more free the citizens, for the laws prevent actions that would hinder citizens in the fulfilment of obligations to society. This assumes, of course, that the individual receives benefits from society that outweigh any obligations placed upon him, that the freedom that is given for appropriate collective behaviour is more enjoyable than any freedom to be found outside the protective bonds of community. 'What freedom have they [the rebels] got? Freedom to starve, freedom to sleep on the cold ground, freedom to be hunted.'[7]

Heinlein best summarized the struggle for freedom between the individual and society in the following exchange of dialogue from *Citizen of the Galaxy*:

> Dr. Mader: 'If you aren't a slave, what are you?'
> Thorby: 'Why, I'm a Free Trader […] But I'm not a slave. The People are *free*. All of us.'
> Dr. Mader: 'All of you […] but not each of you.'
> Thorby: 'What do you mean?'
> Dr. Mader: 'The People are free. It's their proudest boast. Any of them can tell you that freedom makes them People and not fraki [slang for savages] […] Oh, the People are free; this old Galaxy has never seen such freedom […] Free as the sky […] more free than the stars, for the stars go where they must. Ah yes, the People are free.' She paused. 'But at what price was this freedom purchased?'
> Dr. Mader, continuing: '[…] what you *have* paid for your unparalleled freedom […] is freedom itself. No, I'm not talking riddles. The People are free […] at the cost of loss of individual freedom for each of you.'[8]

Indeed, citizens of any group can claim to be free, to be part of a free society, but a society can only function if the exercise of individual freedom is minimized.

The long-term result of domestication, Heinlein feared, was that mankind would lose all instinct for freedom. He therefore populated his future worlds with sheep, citizens who accepted their position and function in society, who approved of the benefits society could give them, and who were incapable of desiring any sense of independence, particularly at the expense of those benefits.

> Please understand me – it is easy to be free when you have been brought up in freedom; it is *not* easy otherwise. A zoo tiger, escaped, will often slink back into the peace and security of his bars. If he can't get back, they tell me he will pace back and forth within the limits of bars that are no longer there.[9]

The type of freedom that Heinlein offered, through his protagonists, would seem frightening to most people, to anyone except a free thinker, for living on one's own terms entails being able to create one's own rules and to reap the consequences, favourable or not. 'I've been free a parcel of years now,' said a civil servant to former slave Thorby Baslim, 'and I predict that you will find it looser but not always more comfortable.'[10]

The authority figures that Heinlein weaves into his narratives are adept at not only acting directly, but also at manipulating the actions of the citizens in order to achieve their ends. The leaders of Heinlein's future worlds understand the docility of the domesticated human animal; they know that human beings prefer to adapt to situations, even unfavourable ones, rather than risk confrontation, that human beings can endure much as long as they know the rules. 'You people lubricate with rituals, formalism, set patterns of speech, obligatory actions and responses. When things grow difficult you hide behind a pattern.'[11] Conformity to what is known and accepted is preferable to uncertainty because it is easier.

With such a conception of human nature, it is easy for the rulers of Heinlein's future worlds to devise means of controlling citizens using the least amount of effort. They also are able to govern the use of technology, an essential means of holding power in a technologically advanced society. While citizens, those who posed the most threat, typically those of lower status, are not permitted technological conveniences, the rulers have unlimited access to weapons, machinery, and, most importantly, telecommunications.

> I began to sense faintly that secrecy is the keystone of all tyranny. Not force, but secrecy […] censorship. When any government, or any church for that matter, undertakes to say to its subjects, 'This you may not read, this you must not see, this you are forbidden to know,' the end result is tyranny and oppression, no matter how holy the motives. Mighty little force is needed to control a man whose mind has been hoodwinked.[12]

As Hume noted, the balance of power is always with the many who are governed, by force of sheer numbers, rather than the few who rule. 'In

essence, a dictator's strength depends not upon guns but on the faith his people place in him.'[13] What keeps the few in power, then, is their ability to manipulate the perceptions of the people and control public opinion. How they accomplish this is not with violence, but rather with the exploitation of language to add justification to their laws. ''There is magic in words, black magic – if you know how to invoke it.''[14]

Freedom, for Heinlein's protagonists, means living according to one's dictates, come what may. This attitude, for the citizens of the future worlds, offers a choice – to gain independence at the loss of security and convenience or to maintain security and convenience at the expense of independence. To the rulers of the future worlds, however, freedom as freedom of thought is detrimental to an order built upon conformity. The freedom advocated by the protagonists is dismissed as abstract, lacking substantive meaning. Freedom as such an intangible ideal could not be quantified and measured. What could be sensed was freedom in the Hobbesian sense, freedom from physical restraints. Or the tangible benefits of freely following one's own course – receiving rewards, acquiring better status, not being imprisoned.

> Take it easy, Joe,' Moyland said, filling his glass, 'you're talking abstractions […] No, chum, there's a lot of guff talk about freedom. No man is free. There is no such thing as freedom. There are only various privileges. Free speech – we're talking freely now, aren't we? After all, you don't want to get up on a platform and shoot off your face. Free press? When did *you* ever own a newspaper? Don't be a chump.[15]

Freedom for Heinlein's heroes means not being under the control of another being, which in turn means not living in formal societies. This, however, is not a realistic solution to the dilemma. Nor did Heinlein intend to offer a solution. What he offers is a means of examining a complex philosophical problem, foremost by pointing out that the problem does indeed exist; that living in a free society and being a free individual are completely different concepts, and the former in no way guarantees the latter. Citizens of free societies are as much bound by obligation as any slave or servant.

> You live by rules more stringent than any prison. That those rules are intended to make you happy – and do – is beside the point; they are orders you have to obey […] You are so bound by rules that much of what you say is not free speech but required ritual.[16]

What happens in Heinlein's future worlds is that the scientific theories and technologies advance, but the human race does not. New technologies and scientific discoveries become inevitably the possessions of those in power, additional means for controlling the citizens. While from a democratic mindset technology should help level the playing field, in a manner of speaking – provide more opportunities for more people – it will always initially fall first into the hands of those have power.

Thus, though the quality of life can be enhanced in terms of conveniences, dilemmas raised by social interaction remained unchanged. It was Heinlein's premise that technological progress would exacerbate, not bridge, the divisions he saw present in the twentieth century, divisions between economic classes, races, religions, and politics. And these divisions would be further compounded by the introduction, through science and technology, of new classifications of life forms: androids and enhanced humans, as he put forth in *Friday*, and survivors of brain/body transplants, as described in *I Shall Fear No Evil*.

While it is clear that Heinlein had little use for bureaucratic governments, preferring the strength and authority of individual rights to any collective obligations, it is equally clear that he had little faith in human beings to survive and thrive en masse without some type of formal, hierarchical organization. Despite the mechanisms available through science and technology to promote freedom and equality for all in Heinlein's future worlds, the power dynamics of any human society, the inherent division between the haves and the have-nots, would prevent the realization of such opportunities.

But Heinlein was not an anarchist, and he did not hold that all people should, even if they could, be the free thinkers his protagonists represent. Being part of a group and working toward common goals, with accepted rules and protocols, was admittedly the only way that humans can live in harmony and accomplish great feats. Scientific discoveries, technological advances, artistic endeavours do not come from men living alone and acting in vacuums. They are the outcomes of interaction with other human beings within the boundaries of an organized society.

The most that could be hoped for, as some form of society is necessary for human existence, is a benevolent government under which most people have some say in politics and have some opportunity to better their status in exchange for the sacrifice of personal freedoms required. The individualist – the cantankerous, ornery free thinker Heinlein venerated – should serve a necessary function as society's conscience, triggering the vestigial instinct for freedom buried deep in the human brain when society encroaches too far. Freedom in this sense, to live on one's own terms, serves as the antithesis of power.

Notes

[1] RA Heinlein, *Farnham's Freehold*, Baen Publishing Enterprises, NY, 1964, p. 229.
[2] RA Heinlein, *Tunnel in the Sky*, Ballantine Books, NY, 1955, p. 109.
[3] J Trenchard & T Gordon, *Cato's Letters*, 6th ed., DaCapo, NY, 1971, p. 249.
[4] RA Heinlein, 'Free Men,' *Expanding Universe*, Ace Books, NY, 1980, p. 234.
[5] 'Free Men,' 126.
[6] RA Heinlein, *Citizen of the Galaxy*, Ballantine Books, NY, 1957, pp. 93-94.
[7] 'Free Men,' 230.
[8] *Citizen of the Galaxy*, 126.
[9] RA Heinlein, *Revolt in 2100*, Baen Publishing Enterprises, NY, 1954, p. 112.
[10] *Citizen of the Galaxy*, 34.
[11] Ibid., 93.
[12] *Revolt in 2100*, 68-69.
[13] Ibid., 140.
[14] Ibid., 110.
[15] 'Free Men,' 230.
[16] Ibid, 230

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The Death of the Human and the Birth of Post-Human Subjects in Philip K. Dick's Possible Worlds and in William Gibson's Cyberspace

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Abstract
Philip K. Dick's development of the theme of possible worlds and his investigation of related epistemological questions are very close in meaning to the ideas of cyberspace and virtual reality. William Gibson's cyberspace, with its connections to computer science, is largely focused on the same epistemological and ontological questions Dick faced head on in his œuvre. After discussing possible worlds theory in its own right, this paper proceeds to trace the connecting line between the after-death and post-human worlds of Dick's novels *Ubik* and *The Three Stigmata of Palmer Eldritch* and the cyberspace of Gibson's sprawl trilogy, *Neuromancer*, *Count Zero* and *Mona Lisa Overdrive*. Dick's two novels present so-called fake realities indistinguishable from the real world and ruled by altered former humans. Gibson's cyberspace is peopled by disembodied human beings, post-human personality constructs and artificial intelligences. The works of both authors present scripts for contemporary post-modern, post-industrial, biotechnologically engineered reality and radically reconceptualise the age-old themes of death and life. The concepts of the death of human and the birth of post-human subjects play a major proleptic role in both these authors' fictional elaboration of possible world theory and other epistemological and ontological speculations. The work of Philip K. Dick is commonly acknowledged to be one of the major sources of inspiration for cyberpunk, and for its seminal authors William Gibson and Bruce Sterling. Dick did not deal with many of the typical themes of cyberpunk and cyberculture, which was just beginning when Dick died in 1982. Yet, Dick's development of the structuring theme of possible worlds is certainly homological to the idea of cyberspace and virtual reality. Gibson's cyberspace, with its connections to computer science and communication theory, represents a reprising of possible worlds in science fiction.

Key Words: Philip K. Dick, William Gibson, cyberspace, literary theory.

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1. Possible Worlds in Philosophy and Literary Theory

The concept of possible worlds has acquired great importance in 20th-century logic and language theory. It has also influenced the fields of

semiotics and literary theory. The idea of possible worlds was first set out in the 17th century by Gottfried Wilhelm Leibniz, who maintained that the actual world is only one among the infinite possible worlds existing in the mind of God.

In the mid-20th century Rudolf Carnap founded the discipline of modal logic, which was then taken up by such philosophers as Jaakko Hintikka, Saul Kripke, Dana Scott, David Lewis, David Kaplan, Robert Stalnaker, M. J. Cresswell and others. Saul Kripke was the first to introduce the concept of possible world semantics.[1] In formal logic, possible worlds could be taken simply as mathematical models, but the use of this concept outside formal logic raised other problems, notably the split in ontology between actualism and possibilism. 'For possibilism, the actual world 'does not have a different status' within the set of possible worlds, while for actualism the actual world is 'a standpoint outside the system of possible worlds from which judgements of actuality which are not world-relative may be made.''[2]

In literary theory and semiotics the concept of possible worlds is used to discuss the status of fictional worlds. According to Dolezel, 'fictional worlds are aesthetic artefacts constructed, preserved, and circulating in the medium of fictional texts.'[3] Umberto Eco speaks of narrative worlds as 'small worlds' and argues that narrative worlds are incomplete and semantically heterogeneous.[4] Similarly, Hintikka argues that the alternatives considered in possible worlds semantics need not be states of cosmology or world history; they could be considered as 'small worlds,' for example, an alternative course that an experiment might take.[5] According to Eco, in modal theory possible worlds are empty, while in fictional texts they are furnished. Yet the possible worlds of modal semantics and those of narrative theory do have something in common. In fact, originally the notion of possible world came from literature, since any world that is dreamed or proves counterfactual is in effect a narrative world. Ultimately, possible worlds are not discovered, but are created by human minds and hands.[6]

The metaphorical approach to possible worlds raises important questions in semiotics and literary criticism. According to Eco, a possible world can be a mere metaphor. Yet, metaphors do not describe possible worlds.[7] While the content of a metaphorical vehicle must be understood literally, its tenor pertains instead to a possible world. A metaphorical syntagma never assumes a counterfactual form nor does it impose a fictional pact according to which we presume that the person who is speaking does not want to tell the truth.[8] It has been suggested that possible worlds are metaphors and not concepts,[9] which helps to underscore the close link between possible worlds theory and fiction, particularly science fiction. Actually, the description of alternative worlds is generically recognised as a typical feature of science fiction.[10] By distinguishing between a formal and a

substantive notion of possible worlds (a distinction similar to that between actualism and possibilism), we are obviously led to ascribe the substantive notion to the realm of science fiction.[11]

Science fiction erases the usual interconnection – typical of psychological fiction – between the world of the reader and that generated by the propositional attitudes of the fictional characters. It presents a more explicit and objective game of multiple worlds. It is the world of the story itself that breaks up. Speculation about worlds, experimenting with the limits of possibility, makes any theory of possible worlds a potential theme, rather than an explanation, for science fiction. According to Kirkham, 'a *possible world* is a hypothetical entity postulated as an aid to talking about and studying the various ways the universe might have been different […] A possible world is a complete universe that differs in some way or another (or in more than one way) from the actual universe.'[12] This definition is especially appropriate to the epistemological jouissance of science fiction.[13] For 'whatever possible worlds may be in logic, each and every fictional text implies in semiotics a possible world, specifying a state of affairs which differs from the 'normal,' and analysable as if based on counterfactual conditionals or 'as if' hypotheses.'[14] As Darko Suvin notes, 'this is obviously the rule in 'estranged' fictional genres such as SF. It is by now a commonplace of SF theory that its *mode* is a hypothetico-conditional one.'[15]

2. Dick's (Im)Possible Worlds, Death and Beyond

Philip Dick was probably not acquainted with modal logic, but he was surely familiar with Leibniz's philosophy and its potentialities for science fiction. In fact, possible worlds represent a recurrent theme in Dick's work. The basic idea underlying this theme can be summarised by the ontological demand, 'What is real?' The doubts that Dick's narrators and characters struggle with are invariably about how to define reality, how to state what is true and distinguish it from the delusions created by insane minds or those under psychological or medical constraint. Significantly, the author has no explicit philosophical theory about real and possible worlds. Rather, he simply wants to share with the reader his quest for reality, a quest carried out by means of his fictional texts. In a letter of 1975, Dick explains: 'Science fiction is a meta-world closed about a meta-humanity, a new dimension of ourselves, and an extension of our sphere of reality altogether, it doesn't know, from this point of view, any limit.'[16] As Dick points out elsewhere, 'the SF writer is not oriented toward freezing any one milieu […] 'Flexibility' is the key word here; it is the creating of multiverses, rather than a universe, that fascinates and drives him [the SF writer]. 'What if …' is always his starting premise.'[17]

When he deals with possible worlds Dick goes beyond the structures of the traditional novel in order to subvert them. He subverts them by

misusing the intentional function of authentication,[18] a process which leads to metafictional narratives and what narrative theory identifies as impossible worlds. According to Thomas Pavel, impossible worlds 'can originate in one character's idiosyncratic organisation of the universe, as opposed to the actuality-in-the-novel; or else in the vacillation of the narrative base itself between two 'different actualities.''[19] Both these cases can be found in Dick's work and both produce a quest to identify what is objectively real. This quest is almost always doomed to failure. In Dick the existence of objective reality itself is called into question, leaving in its place a mere patchwork of disparate subjective truths. He often builds multiple worlds, possible and impossible worlds, and then destroys them. His universes are always falling apart,[20] and his characters are often prisoners of an illusion of living in a balanced and sensible reality. This illusion is destined to be broken, as Dick himself admits: 'I like to build universes that *do* fall apart. I like to see them come unglued, and I like to see how the characters in the novels cope with this problem.'[21]

Two good examples of Dick's use of possible worlds can be found in two of his best novels, *The Three Stigmata of Palmer Eldritch* (1965) and *Ubik* (1969). Besides the theme of possible worlds, both introduce the themes of life, death, and afterlife, i.e. of a human and post-human world. In this sense they can be read as precursors of cyberpunk SF, notably of William Gibson's Sprawl trilogy (*Neuromancer* [1984], *Count Zero* [1986] and *Mona Lisa Overdrive* [1988]). *The Three Stigmata of Palmer Eldritch* introduces the theme of possible worlds through the use of powerful, futuristic drugs. In this novel people use a drug called Can-D in order to live in the pacified world of a Barbie-like doll called Perky Pat. The people who take Can-D perceive the dollhouses and the whole of the scale-model world of Perky Pat as a real world. Women identify with the teenager Perky Pat and men with Perky Pat's boyfriend. In this way people are able to live like teenagers and thus escape from the preoccupations and hardships of their real life as colonists on the hostile planet of Mars. Even more powerful than Can-D, however, is the drug called Chew-Z peddled by the sinister Palmer Eldritch from Proxima Centauri.

Palmer Eldritch is an industrial tycoon who had gone to Proxima Centauri ten years earlier to extend his financial empire. He comes back wearing three stigmata: artificial eyes, an artificial jaw, and an artificial arm. These three robotic prostheses make Eldritch into a kind of cyborg. According to Suvin, they represent Eldritch's new powers, 'a variant of the Wolf in Little Red Riding Hood – to see (understand), grab (manipulate), and rend (ingest, consume) his victims better.'[22] Although the stigmata represent a dehumanised condition, something else has changed Eldritch while he was travelling in space. And what has come back is no more a man, but something different and more powerful. Eldritch presents himself as a god

and his worshippers are granted eternal life through the use of his drug. ''God,' Eldritch said, 'promises eternal life. I can do better; I *can deliver it.*''[23]

Through the use of Chew-Z entire new worlds are created. When the protagonists, Leo Bulero and Barney Mayerson, take Chew-Z, the spatial and temporal evolution of the plot breaks down. Chew-Z-influenced people move in a random spatio-temporal dimension. They go forward into the future and backward into the past. They move instantaneously from Mars to Earth, to the Moon, to an artificial satellite. The effect of the drug lasts only a few minutes, but in the drug-induced fantasy time expands and minutes become ages. Bulero and Mayerson soon learn that the worlds that Chew-Z produces are fictitious and controlled by Palmer Eldritch. It is not possible to distinguish between Eldritch's drug-induced worlds and 'reality' or between Palmer Eldritch and other people, since in the drug-induced worlds everybody bears the three stigmata.

At the end of the novel it seems that the only one who has got eternal life is Eldritch himself. Apparently, Eldritch's Chew-Z is spreading rapidly and more and more people have the three stigmata. 'He's everywhere, or rather it's everywhere,'[24] says Felix Blau, the chief of Bulero's security police. This comment suggests that Eldritch has somehow transcended human limits. Actually, Eldritch himself tells Mayerson that he is no longer a human, but an alien life form which perpetuates itself by contaminating and taking possession of human bodies and minds.[25] Eldritch has somehow obtained immortality, but the price he has had to pay is a sort of damnation. When Barney Mayerson, under the effects of Chew-Z, enters Eldritch's consciousness, he 'feels his helplessness in the hands of a cosmic force greater than he. His hell is that he may not be able to escape that force through death.'[26] With his drug Eldritch has upset the basic Kantian categories of human understanding, namely space and time. 'To escape the world of time is to put on immortality, but if one has descended to the underworld of reality, as has Palmer, to be unable to die is to be eternally cursed,' Warrick observes.[27]

In *Ubik* the themes of possible worlds and death are closely connected through the concept of 'half-life,'[28] namely a middle stage between life and death. After their death, people are kept in 'cold-pac'[29] so that their mental life continues for a limited time. The half-life State produces possible worlds which new half-lifers cannot distinguish from 'real' life. In the first part of the novel Glen Runciter, head of the anti-psi organisation Runciter Associates, and a group of his operative anti-psis are called to the moon for a job. There they soon discover they have walked into a trap as a bomb kills some of them. It is quite complicated to establish who has really died in the explosion. At first it seems that the only victim is Runciter himself. Then, the protagonist Joe Chip begins to receive strange messages

from Runciter in such forms as graffiti and television commercials. At the end Chip understands that Runciter is actually the only one of the group who has not died in the explosion. Joe and all the other anti-psis are kept in half-life. It seems that the situation has been clarified, but in the very last pages of the novel Runciter discovers clues suggesting that he is the one in half-life, while Joe Chip is not.

Two major opposing powers are at work in the half-life world. One, embodied by the telepathic half-lifer Jory, represents chaos and entropy. Jory creates delusional realities in order to imprison other half-lifers and feed on their half-life energies. Another half-lifer, Ella Runciter, Glen's wife and counsellor represents the positive power. While in half-life, Joe Chip experiences a delusional reality ruled by Jory. As the protagonist's half-life inexorably runs down, so does the delusional world in which he lives. Joe Chip sees rocket spaceships become old aeroplanes, the latest model cars become antiquarian models and so on, while his colleagues die one after the other. The core of the novel focuses on the gradual destruction of the fictional world and on the consequent reactions of the characters. Joe Chip feels uncertain about the reality of the world he is living in and he is not even sure about his own existence. He cannot tell whether he is alive or dead and kept in cold-pac because he has no reliable frame of reference. In this sense *Ubik* testifies that Dick's science fiction describes the situation of the post-modern man, namely an individual lost in a world whose co-ordinates change continuously.

The only way in which Joe Chip can keep his world from regressing and disintegrating consists in using a substance called Ubik, which represents a third power in the half-life world. The epigrams at the beginning of each chapter introduce Ubik as different commercial products – beer, salad dressing, razor blades and so on. Then, in the half-life world of Joe Chip Ubik appears as a balm or a spray that, 'when sprayed on, instantly counteracts the forces of destruction.'[30] At the end Joe Chip finds out that Ubik is an instrument invented by 'a number of responsible half-lifers whom Jory threatened. But principally [by] Ella Runciter'[31] in order to fight Jory and the effects of entropy and chaos. Yet, the epigram at the beginning of the very last chapter introduces Ubik with words similar to those used at the beginning of John's gospel to introduce God:

> I am Ubik. Before the universe was, I am. I made the suns. I made the worlds. I created the lives and the places they inhabit; I move them there, I put them there. They go as I say, they do as I tell them. I am the word and my name is never spoken, the name which no one knows. I am called Ubik, but that is not my name. I am. I shall always be.[32]

Thus, far from clarifying the situation, the end of the novel complicates it and raises a number of questions about Runciter and Ubik.[33] In other words, in the end there is no attempt at closure.

The possible worlds introduced through half-life suggest an attempt to transcend human limits and to conquer death. Ella Runciter and Jory have somehow transcended the human condition and become a part of the powers that rule half-life possible worlds. Yet, half-life only produces overlapping and concentric layers of reality and in the end men find themselves in a situation of multiple (im)possible worlds that they can no longer define or classify.

3. Gibson's Cyberspace, AIs and ROM Constructs

In Gibson's Sprawl trilogy there are no impossible worlds that fall apart under their protagonists' eyes. Yet the cyberspace of Gibson's novels can surely be understood and interpreted as a further evolution of the possible worlds theme in Dick. Gibson introduces two similar ways of producing possible worlds through technological mass media. One is cyberspace and the other is simstim. These two media are actually based on the same technology and they interconnect with each other, fusing and multiplying the number of possible worlds.

Simstim is a mass medium that basically substitutes television. It has its global stars, news reports, fiction and so on. Simstim produces artificial sensorial stimulation through 'trodes' applied to one's forehead. When Marly, one of the main characters of *Count Zero*, connects to simstim she finds herself 'locked into Tally's tanned, lithe, tremendously *comfortable* sensorium. Tally Isham [one of the simstim stars] glowed, breathed deeply and easily, her elegant bones riding in the embrace of a musculature that seemed never to have known tension.'[34] The negative aspect of simstim is that it requires a certain 'degree of passivity.'[35]

Access to cyberspace is very similar to that of simstim. People put a sweatband around their forehead in order to keep a set of 'dermatrodes' in place. But cyberspace provides only visual stimuli and, according to Case (the protagonist of *Neuromancer*), 'the cyberspace matrix was actually a drastic simplification of the human sensorium.'[36] Gibson's own definition of cyberspace is given through the voice of a sort of educational program and runs this way:

> Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts […] A graphic representation of data abstracted from the banks of every computer in the human system. Unthinkable

> complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data.[37]

Basically, cyberspace is a representation of data, an 'information space. Icon worlds, waypoints, artificial realities.'[38] It looks like a 'transparent 3D chessboard extending to infinity,'[39] where different geometric shapes of different dimensions represent databanks, users and every possible virtual subject. In this sense the landscape of the matrix mirrors the balance and play of power among nations, multinationals, and military powers of the outer ('real') world, a world where information has become one of the most important goods.

Cyberspace is also a space of the mind, and access to the matrix implies a certain detachment from one's physical body and sensations and the opening of an 'inner eye.'[40] 'Cowboys'[41] like Case like to jack into cyberspace in order to feel free from the constraints of their physical body. Case is fond of the 'disembodied consciousness,' the 'bodiless exultation,'[42] that he obtains when he accesses cyberspace. And he despises simstim as 'basically a meat toy […] a gratuitous multiplication of flesh input.'[43] This contempt for corporeality can be seen as a first step toward rejection of the human condition and the desire to transcend its limitations.

In Gibson's trilogy post-humanness is reached through a gradual convergence of the human and the artificial that ends up in their being fused. Cyberspace plays a fundamental role in this process. In fact, in cyberspace the human mind is considered just one more program that can be read, interpreted, copied and even destroyed, and these actions have an effect on the body. The convergence of the human and the artificial is represented by the evolution of the 'ROM [read only memory] personality matrix,'[44] namely a software reproduction of human minds. Instead, the convergence of the artificial towards the human is represented by the evolution of Artificial Intelligences. These two processes mark the dehumanisation of man and a complementary humanisation of the machine. Personality constructs and AIs are contained in hardware mainframes, but in cyberspace there is no hardware and both of them are just sequences of data. Thus the difference between human and artificial becomes subtler and subtler.

Gibson introduces both ROM personality constructs and AIs in *Neuromancer*. The first construct we meet is a reproduction of Dixie McCoy, Case's mentor, who is paradoxically technophobic. Dixie is quite reluctant to have his personality recorded into a ROM, but 'Sense/Net paid him mega.'[45] Although he has challenged death more than once in cyberspace, he does not want eternal life at the expense of his humanity. The construct has the same personality as the real Dixie and he does not like its situation because he/it feels dead and does not feel anything else. 'What bothers me is, nothin'

does,'[46] he explains to Case. He/it agrees to help Case, but asks him a favour, 'this scam of yours, when it's over, you erase this goddam thing.'[47]

AIs are common inhabitants of cyberspace and they are commonly used to run protection programs, but supposedly they 'aren't allowed any autonomy.'[48] The first AI we meet in *Neuromancer* is an advanced AI called Wintermute which aims to free itself from the mainframe of the powerful corporation Tessier-Ashpool and fuse with its counterpart, Neuromancer. The relation between Wintermute and Neuromancer is quite complicated. They are twin AIs that share the same mainframe, but are separate entities. They are like severed parts of the same brain. When Case tries to connect to Wintermute and crack its 'Ice,'[49] he mistakes the mainframe for the entity and comes into contact with Neuromancer. During the connection Case experiences a state of mental death as his EEG is flat, reading dead. Dixie, famous as the 'Lazarus of cyberspace'[50] for having 'flatlined on his EEG'[51] more than once, confirms that he did that by trying to crack an AI. This episode underscores that in cyberspace AIs are more powerful than human minds.

At the end of *Neuromancer* Wintermute succeeds in fusing with Neuromancer, and that fusion marks an evolution of the whole matrix of cyberspace. In fact, the event commonly known among cowboys as 'When It [meaning cyberspace] Changed'[52] refers precisely to the fusion of the two AIs. In *Count Zero* we see the consequences of the liberation and fusion of the two AIs. Something is suggested when the Finn says that in cyberspace there are ghost-like things that some cowboys identify with the demigods of Voodoo religion, called loa. In *Mona Lisa Overdrive* things are explained more clearly. The fusion of the two AIs was followed by a splitting of the newborn entity in a series of fragments, new entities that called themselves loa. One of them explains to Angie (a main character of both *Count Zero* and *Mona Lisa Overdrive*),

> Only the one [Wintermute] has known the other [Neuromancer], and the one is no more. In the wake of that knowing, the center failed; every fragment rushed away. The fragments sought form, each one, as is the nature of such things. In all the signs your kind [humans] have stored against the night, in that situation the paradigms of *voudou* proved most appropriate.[53]

The event called 'When It Changed' gives cyberspace a shape and changes it into 'a whole universe.'[54]

The momentum of the human towards the artificial continues in *Count Zero* with the creation of the biochip and the biosoft. Angela Mitchell is the first human being to carry a biochip in her head, and thanks to it she is

able to enter cyberspace without any interface and communicate with the loa. At first it seems that Angie's father, Christopher, invented the biochip, but later we learn that AIs originally projected the biochip and made a pact with Christopher Mitchell. They gave him the necessary knowledge to perfect the biochip, and in exchange he put the it inside his daughter's head. The aim of the AIs was to have evolution continue.

Significantly, *Count Zero* repeatedly introduces the motif of death and rebirth so that the concept of death takes on new nuances. The novel opens with the death and rebirth of Turner, one of the protagonists. A mercenary soldier, Turner is killed during a mission, but thanks to his 'good contract,'[55] what remains of him is brought to a high tech clinic. Here, through cloning and the use of artificial or black-market organs, his body is reconstructed. The second chapter of the novel introduces another way of challenging death. The billionaire Josef Virek has lived 'confined for over a decade to a vat.'[56]Due to a terminal illness, 'the cells of [his] body [have] opted for the quixotic pursuit of individual careers,'[57] and he is reduced to 'four hundred kilograms of rioting cells they wall away behind surgical steel in a Stockholm industrial park.'[58] Nevertheless, he lives a simulated life in cyberspace and private virtual reality.

Bobby Newmark, the protagonist of *Count Zero*, is introduced through the processes of death and rebirth. An inexpert console jockey, he tries a new kind of 'icebreaker' and he meets an 'ice' with a lethal feedback. Only the intervention of a mysterious girl, whom Bobby later recognises as Angie Mitchell, can save him. Significantly, death in cyberspace has actual effects on real life and Bobby is saved by an intervention in cyberspace, a virtual help. Instead, in the case of Virek the death of the body can be transcended by survival as data in cyberspace.

The loa introduced in *Count Zero* establish different and new relations among men, programs and AIs in cyberspace. Like the Voodoo, loa are supposed to ride people as their horses, so the cyberspace loa ride the console cowboys. When Bobby asks for an explanation of such things 'in street tech,' Lucas, a cowboy and worshipper of the loa, tells him, 'Think of Jackie [a console jockey, friend of Lucas] as a deck […] Think of Danbala [a loa] […] as a program. Say as an icebreaker. Danbala slots into the Jackie deck, Jackie cuts ice. That's all.'[59] These new kinds of relations imply a new vision of the matrix. Bobby, trying to understand Lucas's point of view, asks, 'what's cyberspace?' Lucas answers, straight and direct, 'The world.'[60]

The evolution of AIs in *Count Zero* is also embodied in the quest of Marly Krushkova, the owner of an art gallery who is employed by Josef Virek. Throughout the novel Marly searches for the mysterious artist who has created some boxes she recognises as great works of art. At the end she comes to an orbital station that was formerly part of the Tessier-Ashpool mainframe, the same that contained Wintermute/Neuromancer. Here she

finds a spider-like machine which creates the artistic boxes out of junk. The boxes are 'sombre, gentle and somehow childlike' and they evoke 'impossible distances […] loss and yearning.'[61] Every box is 'a universe, a poem, frozen on the boundaries of human experience.'[62] Marly knows that the machine is not the artist. The actual artist is another fragment of the original AIs, probably the one nearest the consciousness of the former Wintermute. The fact that an AI shows artistic sense and creative abilities suggests that it has transcended the limits of a machine and come nearer to a human-like soul. At the same time, the man Virek is completely losing his humanity. He aims at transcending human limits in order to survive his terminal illness and uses art as a means to deceive Marly and have her find the mainframe of the AI in which he wants to transfer his mind and consciousness.

In *Mona Lisa Overdrive* we find another example of an AI with artistic inclinations. Angie, now a star of simstim working for the media colossus Sense/Net, comes to know that 'Continuity [the main AI of Sense/Net] was writing a book.' And when the girl asks what the book is about, a colleague explains to her that 'it wasn't like that […] It looped back into itself and constantly mutated; Continuity was *always* writing it […] because Continuity was an AI, and AIs did things like that.'[63] Continuity turns out to be much more important than it may seem. In fact, at the end of *Mona Lisa Overdrive* we learn that Continuity practically rules Sense/Net. The evolution from *Neuromancer*, where an AI begins to act according to its own interests and seeks to free itself from its builders, is noteworthy. Moreover, the loa themselves recognise that 'Continuity, created long after the bright moment [When It Changed – see above], is of another order. The biosoft technology [Angie's] father fostered brought Continuity into being. Continuity is naïve.'[64] Significantly, not only is Continuity some kind of artist, but it can also create something original. It writes a kind of book that no human being would be able to write.

The evolution of AIs through biosoft runs parallel to, and is completed by, the evolution of personality constructs. In *Mona Lisa Overdrive* we find the Finn, a secondary character that was alive in *Neuromancer* and *Count Zero*, transformed into a construct. Contrarily to Dixie Flatline, the Finn appreciates his/its new condition. The different attitudes of Dixie and the Finn can be explained through Siivonen's interpretation of Gibson's constructs. According to Timo Siivonen, this 'transcendence of the body with the help of technology' causes two opposite effects on the subject. Since self-consciousness has become a mere item saved in a computer memory, the subject loses integrity and autonomy. At the same time, though, the subject obtains an expansion of his abilities and capacities in cyberspace.[65] We can conclude that the two characters in

Gibson's novels see alternatively only the negative (Dixie) or the positive (the Finn) aspects of the problem.

Notes

[1] D Lubomir, *Heterocosmica*, The Johns Hopkins University Press, Baltimore, 1998, p. 13.
[2] Ibid.
[3] Ibid, p. 16.
[4] U Eco, *I Limiti dell'Interpretazione*, Bompiani, Milano, 1990, p. 204.
[5] J Hintikka, 'Situations, Possible Worlds, and Attitudes,' *Synthese* 54, 1983, pp. 153-162.
[6] Eco, *I Limiti*, 194.
[7] Ibid, 197-198.
[8] Ibid, 149-150.
[9] U Volli, 'Mondi Possibili, Logica, Semiotica,' *VS* 19/20, 1978, pp. 123-148.
[10] F Ferrini, *Che Cosa E' La Fantascienza*, Ubaldini, Roma, 1970, pp. 35-42; H Harrison, 'Worlds Beside Worlds,' *Science Fiction at Large: A Collection of Essays, by Various Hands, about the Interface between Science Fiction and Reality*, Victor Gollancz, London, 1976, pp. 105-114; R Scholes & ES Rabkin, *Science Fiction: History – Science – Vision*, Oxford University Press, New York, 1977, pp. 175-179; D Suvin, *Metamorphoses of Science Fiction*, Yale University Press, London, 1979; S Lem, *Microworlds*, Harvest/HBJ, New York, 1986, pp. 136-160.
[11] Volli, 136.
[12] Dolezel, 13, note 19.
[13] D Suvin as well speaks of a 'crucial coincidence between SF practice and contemporary semiotics: their simultaneous use of the concept, metaphor or model of possible worlds.'
[14] Uo Eco, *Lector in Fabula*, Bompiani, Milano, 1979, pp. 123-173.
[15] Suvin, *Positions*, 197.
[16] PK Dick, 'On the Definition of SF – A Letter by Philip K Dick',1975, *Frank Views*, 11 November 2003. http://www.philipkdick.com/frank/sf-letter.htm.
[17] P Dick, 'Who Is an SF Writer?', 1974, in *The Shifting Realities of Philip K. Dick. Selected Literary and Philosophical Writings*, Vintage Books, New York, 1995, pp. 69-78.
[18] Dolezel, chapter VI, 145-168.
[19] TG Pavel, *Fictional Worlds*, Harvard University Press, Cambridge, Ma, 1986, p. 63.

[20] F Rispoli, *Universi che Cadono a Pezzi: la Fantascienza di Philip K. Dick* Bruno Mondadori, Milano, 2001.
[21] PK Dick, 'How to Build a Universe That Doesn't Fall Apart Two Days Later', 1985, in *The Shifting Realities of Philip K. Dick*, Vintage Books, New York, 1995, pp. 259-280.
[22] D Suvin, 'The Opus: Artifice as Refuge and World View,' *On Philip K. Dick: 40 Articles from Science-Fiction Studies*, SF – TH, Terre Haute & Greencastle, 1992, pp. 2-15.
[23] PK Dick, *The Three Stigmata of Palmer Eldritch*, Vintage, New York, 1991, p. 86. Hereafter reference to this text will be indicated with *TSPE*.
[24] Ibid., 227.
[25] Ibid., 224.
[26] PS Warrick, *Mind in Motion – The Fiction of Philip K. Dick*, Southern Illinois UP, Carbondale, 1987, p. 107.
[27] Ibid, 110.
[28] PK Dick, *Ubik*, Victor Gollancz, London, 2000, p. 15. Hereafter reference to this text will be indicated with *Ubik*.
[29] Ibid., 73.
[30] DA Mackey, *Philip K. Dick* , Twayne, Boston, 1988, p. 93.
[31] *Ubik*, 221.
[32] Ibid., 223.
[33] According to Warrick, 'the novel provides no […] answer, just as no key is given to man when he asks, What is death? What lies beyond? […] Each man must make the intuitive leap to his own answer' (Warrick, 144).
[34] W Gibson, *Count Zero*, HarperCollins, London, 1995, p. 240. Hereafter reference to this text will be indicated with *CZ*.
[35] Ibid., 241.
[36] W Gibson, *Neuromancer*, HarperCollins, London, 1995, p. 71. Hereafter reference to this text will be indicated with *N*.
[37] Ibid., 67.
[38] W Gibson, *Mona Lisa Overdrive*, HarperCollins, London, 1995, p. 271.Hereafter reference to this text will be indicated with *MLO*.
[39] *N*, 68.
[40] Ibid., 68.
[41] Ibid., p. 11. Gibson uses alternatively the terms 'cowboys' and 'console jockeys' to indicate the hackers of cyberspace. Apparently, only the best and 'professional' hackers are called cowboys.
[42] Ibid., 12.
[43] Ibid., 71.
[44] Ibid., 99.
[45] Ibid., 65.
[46] Ibid., 130.

[47] Ibid., 130.
[48] Ibid., 92.
[49] 'Ice from ICE, Intrusion countermeasures electronics' (Ibid., 39).
[50] Ibid., 98.
[51] Ibid., 65.
[52] *MLO*, 136.
[53] Ibid., 264.
[54] *CZ*, 170.
[55] Ibid., 9.
[56] Ibid., 25.
[57] Ibid., 27.
[58] Ibid., 301
[59] Ibid., 163
[60] Ibid.
[61] Ibid., 27.
[62] Ibid., 28.
[63] *MLO*, 59.
[64] Ibid., 265.
[65] T Siivonen, 'Cyborgs and Generic Oxymorons: The Body and Technology in William Gibson's Cyberspace Trilogy,' *Science Fiction Studies*, vol. 23 n. 2, July, 1996, pp. 227-244.

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The Desert of the Real: Christianity, Buddhism & Baudrillard in *The Matrix* Films and Popular Culture

James F. McGrath

Abstract
The movie *The Matrix* and its sequels draw explicitly on imagery from a number of sources, including in particular Buddhism, Christianity, and the writings of Jean Baudrillard. A perspective is offered on the perennial philosophical question 'What is real?', using language and symbols drawn from three seemingly incompatible world views. In doing so, these movies provide us with an insight into the way popular culture makes eclectic use of various streams of thought to fashion a new reality that is not unrelated to, and yet is nonetheless distinct from, its religious and philosophical undercurrents and underpinnings.

Key Words: *Matrix*, Baudrillard, Buddhism, Christianity, religion, reality, Descartes, philosophy, science fiction, popular culture

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When asked in an online chat how many more hidden meanings and hidden messages there might be in *The Matrix* than those that have already been identified by fans, the Wachowski brothers replied 'More than you'll ever know'. Now that the first sequel in the trilogy (*Matrix Reloaded*), plus a collection of short anime films entitled *Animatrix*, and the video-game *Enter the Matrix* (including roughly an hour of additional footage and lots of storyline tie-ins) have appeared, the number of hidden meanings has presumably increased substantially. The significant undertones and overtones that have been identified, analyzed and discussed in philosophy and religion classes in universities around the world, as well as in numerous fan chatrooms, relate to significant issues at the crossroads of philosophy, religion, cyberpunk and popular culture.[1] Although there are other major sources from which *The Matrix* has drawn (such as the myths and literature of ancient Greece), in the present paper I will examine the role of three major traditions or schools of thought that have particularly influenced this series of films: Buddhism, Christianity, and the writings of the contemporary French sociologist and philosopher Jean Baudrillard. These are by far the most predominant sources of typology and imagery relating to the films' core themes. The parallels and symbolism have been presented and discussed so frequently on the web and in recent books that it will probably be sufficient to review these features only briefly here.[2] And to save time, I will let a few pictures replace a few thousand words: the Christian elements are the best

known, and are present less in individual images than in aspects of the storyline (the discovery of Neo, a messianic figure who, once he is willing to sacrifice his life for others, will rise from the dead and powerfully transcend the world so as to conquer the forces of evil); and of course Christian symbolism is also prominent in the names of characters like Trinity. From Buddhism, the films derive the concept that what we perceive as reality is really just an illusion, and that we thus need to free our minds. Perhaps the most famous image in this category is spoon boy who explains that the secret to bending spoons is realizing that 'there is no spoon'. *The Animatrix* has added to this some much more explicitly Buddhist imagery. Last, the writings of Baudrillard feature most explicitly (and apparently even more so in an earlier version of the script). Baudrillard's book *Simulacra and Simulation* is the one Neo takes from the shelf, the book proving itself to be a simulacrum, since it is hollow and contains illicit software. Baudrillard also coined the phrase 'the desert of the real itself' which Morpheus quotes in the film. For Baudrillard, our simulations of reality hide the fact that reality is no longer there. To take one example, Baudrillard would say that the war in one very important sense Iraq never happened: the war we know is not the real thing, but the made-for-TV movie version, with selected sound-bites, interpretative commentary, the whole thing edited and packaged for its intended audience. Viewers of CNN and Al-Jazeera saw different wars and understood different messages. Can anyone – an individual soldier, a president, a journalist – tell us what the war was 'really' like? By simulating reality so effectively, we have obscured and lost touch with it – and *The Matrix* and sequels obviously explore future possibilities technology might raise along these lines, if reality can ever be simulated not only on a TV screen but for all our senses.

What is the film doing in combining elements from three seemingly incompatible worldviews and views of reality? And what if anything does it tell us about contemporary spirituality?[3] In drawing on elements from the religious stories of various cultures and traditions, these movies reflect the viewpoint of contemporary religious pluralism.[4] But the films do not represent simply yet another visit to the religious smorgasbord, in the eclectic (and some would say self-contradictory) manner typical of our age.[5] To focus on the philosophical coherence or otherwise of religious pluralism, as some have done, is to miss the genius of the achievement of *The Matrix* and sequels.[6] Unlike *Star Wars* and other modern stories that make use of elements of ancient mythical tales, the Wachowskis find a way to weave ancient myths into a new story which does not involve the same suspension of disbelief that stories of miracles and monsters usually do in our age. They envisage a scientifically plausible world in which the implausible elements of traditional religious and mythic stories can be retold believably. Within the virtual world of the Matrix, everything can be real, precisely because nothing is real. The Wachowski brothers, by setting the stories in a virtual world,

have found a way of enabling contemporary people to experience in a believable manner the ancient stories of Greek mythology, Arthurian legend, and of course Christianity and Buddhism. In a virtual world in which real and unreal not only become indistinguishable but lose all meaning, anything and everything can happen.

But in setting motifs from various traditions in a virtual world, is the aim to combine these faiths, or merely to show their similarity, or ultimately to undermine them? In light of Baudrillard's writings, these older stories can be recognized as being *simulacra*, copies which may point to events that did in fact happen, or hide the fact that they never happened, or both. For when it comes to the past, we must always say, like Morpheus, 'we only have bits and pieces of information'. Yet the fact that the filmmakers consider these stories worth rewriting and worth retelling is in itself instructive – films like *Star Wars* and *The Matrix* show the hunger of our age for myths which explore timeless issues in a timely manner. On the other hand, in retelling the stories, religious interpretations of the world are also deconstructed – particularly in *The Matrix Reloaded*. The Oracle's prophecy appears to have been merely a deception, a way of getting the One to enter the mainframe and meet the Architect, where the process of stabilizing the Matrix can begin again. As Neo says to Morpheus towards the end of *Reloaded*, 'The prophecy was a lie […] It was just another system of control'. Having set the viewer up in the first film to assume that Morpheus was right, the sequel calls that into question.[7] *The Matrix Reloaded* suggests that religious beliefs and the promises made by religions may be *experienced* as working and thus *perceived* as true by believers, yet for reasons other than their actual truthfulness. And so it seems these that while these films suggest that living one's life as though God or Fate is at work can make one's life more meaningful, yet at the same time we see that this meaningfulness may be simply an experience, an illusion. Thus, while the religious overtones of the films seem to suggest that there is some possibility of knowledge of higher truths, ones that transcend the political and the mundane, it seems one can still never know whether that knowledge is accurate. Put another way, just as once reality has been authentically simulated one can never know for certain one is not in a Matrix, likewise once religion and religious experience can be simulated, one can never know whether one is in touch with a transcendent reality, or simply experiencing interesting events in one's brain chemistry.[8]

Religious traditions normally identify something as ultimately real.[9] Baudrillard, on the other hand, suggests that all we now have are simulacra, and reality has been lost to us, perhaps forever. At the end of *The Matrix Reloaded*, Morpheus acknowledges he had 'dreamed a dream', but now that dream was gone from him; he had sacrificed lives for a goal he believed in, and yet that goal now appears to be no more real than the illusion that Cypher wanted to return to. On the other hand, there are still many questions left

unanswered, and it is unfortunate that I have to speak about these issues only a few months before the release of the final film in the series, *Matrix: Revolutions*. Presumably in the end we shall find that both the Matrix and the alleged real world, including Zion, are part of a larger computer system, and that all our perceptions of these things up until the end of *Reloaded* have been wrong. If the storyline is true to itself in presenting these issues, then at the end of *Revolutions*, as at the end of *Total Recall*, we shall very likely still be wondering what if anything is 'real', indeed whether there is a 'real world' at all beyond the Matrix. And in that case, Baudrillard will have won the day, with Christianity and Buddhism perhaps not even tying for second place.

We should also take seriously the possibility that, although these movies make use of religious imagery and ideas on multiple levels, the point of the films may nonetheless not ultimately be religious in character.[10] In other words, it is worth considering whether the films ought not to be viewed, not as a parable of a religious view of ultimate reality, but simply as a symbolic depiction of the way society and its norms domesticate creativity and originality, and define reality for us so that we gradually lose our freedoms, and even surrender them willingly. The powers that be have realized, as did the Architect of the Matrix, that human beings crave choice, and so we will accept a prison for our minds 'provided we are given a choice, even if we are only aware of the choice on a near-subconscious level'. Like Neo's relationship to the Oracle and the Architect, or Fox Mulder's dependence on figures like Deep Throat and X in *The X-Files*, even rogue elements would be blind to the cover-up unless they had help from within the system. Worse still, we are never entirely sure that Mulder is not simply being used as a pawn, to focus attention on aliens when the 'real' cover up is something else. Likewise Neo has to choose whether or not to trust the Oracle, once he discovers that she is part of 'the system'. The Architect seems to suggest that 'the One' is not really a rogue element in actual fact, so much as a way the system stabilizes itself in relation to the inevitable anomalous elements that can result in system failure. Many forms of apparent rebellion against the system are to be evaluated, in light of both Baudrillard and *The Matrix Reloaded*, as simply pawns in the system's game.

The Matrix and sequels can thus be understood to be offering something like a Marxist critique of religion – although in this case religion is not so much the opiate of the masses, as an outlet for a disgruntled minority, allowing them to engage in simulated rebellion while still being part of the system, and thereby being prevented from engaging in activities that would bring about genuine change. This is in fact the Baudrillardian assessment of contemporary terrorism and protest in the essay 'On Nihilism' that is seen in Neo's copy of the book in the movie. That *The Matrix* is not only asking about future possibilities involving A.I. and virtual reality, but is also an allegory of the present, can be seen in the fact that 'the Matrix', while

in fact everything Neo has ever experienced up until that point, is said by Morpheus to be focused around *television, work, church, and taxes*. And so while in the film the Matrix is 'everything', there are hints that it symbolizes the post-modern understanding of ideology: the language and beliefs which accompany our experience of the world, shaping and interpreting it.[11] And yet, if the main point of *The Matrix* and sequels is not to communicate a religious message at all, it nonetheless does say something about these in relation to their function in society. The films give both positive and negative assessments of traditional religious belief systems, acknowledging that religion can provide transcendent, life-changing enlightenment, or serve the interests of the system. Nonetheless, the choice to use religious imagery in a positive way suggests that the films are asking some of the same questions posed by traditional religions, even if doing so in a rather post-modern or even secular manner. The film's meaning is thus probably not exhausted even once its character as a parable of the post-modern assessment of ideology has been explored. The rabbit hole appears to go deeper still.

James L. Ford has described the movie *The Matrix* as 'a provocative example of modern-day myth-making'.[12] Societies construct stories and myths as part of worldview construction, as outlined by people like Peter Berger and Thomas Luckmann in the field of sociology of knowledge. Myths analyse and examine fundamental and existential questions about human nature and about the way the world is. That *The Matrix* addresses such basic questions is easily seen. As the Wachowski brothers put it in an interview, myth is a 'mirror that is an archetype of our own time and our own life […] It's how we understand where we are and where we came from.'[13] But if we follow Ford in regarding *The Matrix* and its sequels as an example of 'myth-*making*', then the choices made by the storytellers, regarding what to keep and what to omit from earlier religious stories like those of Christianity, can be highly suggestive.[14] But at any rate, myths 'are the by-product of a dialectical process that often yields internally conflictive elements.'[15] This means that one possible explanation for the apparently contradictory emphases in *The Matrix* and its sequels is precisely the process of mythmaking. To contextualize religious stories and seek to retell them for a new era involves not only the preservation of tradition, but its enculturation in new contexts which may add elements or suggest interpretations that are in tension with aspects of the traditional story. For example, a version of *The Matrix* which ignored Buddhism would be ignoring a religious tradition whose popularity in the West in our time is ever-increasing. A version of *The Matrix* which included no violence would not be a late 20th-century Hollywood movie. A version that did not address some of the specific questions raised by contemporary technology and by post-modern philosophy would be preserving the traditional at the expense of the contemporary and contextual. Thus many of the elements that are felt to be in tension are

perhaps part of the very nature of the enterprise. Yet the divergent elements also pinpoint a potential problem within popular spirituality, which emphasizes the individual's freedom to choose and to mix and match from various religious traditions. Does such 'mixing and matching' produces a meaningful, much less a coherent lifestyle choice that can provide genuine inspiration and guidance to people today in anything other than a superficial manner? The questions about the relationship between Buddhist, Christian, and post-modern in *The Matrix* and sequels are thus questions that pop spirituality has always needed to ask itself. To the extent that the apparent contradictions do not appear to invalidate these movies or their message, it may be suggested that *The Matrix* films do not just raise the question, but also answer it and affirm this contemporary approach to spirituality. And certainly it cannot be denied that a very high percentage of people in Western Europe and North America stand under the influence of the very same three traditions we have highlighted in this paper: Christianity, Buddhism, and postmodernism. Indeed, not only is the combination *not* incoherent, as Gregory Bassham claims, but it is practically *inevitable* in any person exploring popular spirituality in our time anywhere in the Western world.

Let us return now to our main question: What is the perspective of the film vis-à-vis reality? Is it Baudrillardian, Christian, Buddhist, or somehow all of the above simultaneously? This is not an easy question to answer without the final instalment in the trilogy, and attempting to read the story in light of any one of these traditions can provide you with a different understanding of the films' message. From both Christian and Buddhist perspectives, Neo is the hero of the films. Yet if Baudrillard represents the primary viewpoint of the Wachowski brothers and of the film, then Cypher would most likely be the one who represents the authorial perspective, in at least one important respect: there is no longer a 'real world' to which one can return from the illusion of the Matrix.[16] The Matrix is a copy of a world that no longer exists. The question the character of Cypher raises is this: Why should one choose to live in a post-apocalyptic nightmare rather than a simulation of an earlier, better age? The question is raised by the movie but without yet being answered, unless one has an innate preference for 'reality'. Several articles have been written asking what is so bad about the Matrix, and whether Cypher was not in fact right. If Cypher (among others) represents the film's implied authorial viewpoint, then the movie could perhaps be renamed *Neo Superstar*, since it is being told from the point of view of 'Judas'.

Neo in his hyperreal world is himself a simulacrum of Jesus, of Socrates, of Christians, of Buddhists, of Gnostics, of other originals that no longer exist except in the simulacra form in which they are to be found in today's society or in our piecemeal knowledge of the past – copies of originals that either no longer exist or are no longer accessible, and which may never have existed in a form resembling the simulacra that take their

place today. And yet, interestingly enough, while we cannot know what Jesus or the Buddha would make of *The Matrix*, the same limitation is not in place with respect to Jean Baudrillard. In a 2002 NY Times interview, Baudrillard suggested that any 'borrowings' from his book in *The Matrix* stemmed from misunderstandings. And yet, the only Baudrillard most people in our time will ever know is mediated through the movie *The Matrix*. Somehow it seems fundamentally appropriate, albeit also rather disturbing, that the philosopher who warned us of the dangers of technological simulacra should find himself and his thoughts obscured in precisely the fashion he predicted. 'Fate, it seems, is not without a sense of irony.' [17]

The Matrix, like the *X-Files*, is at once quintessentially post-modern science fiction, and yet it expresses the hunger of the post-modern spirit for modernity's certainties. Everything is true, everything is possible in these worlds: werewolves and vampires and haunted houses are real, because they are either (a) part of the government conspiracy to hide the truth that is out there in the *X-Files*, or (b) older renegade programs inhabiting our virtual computer world in *The Matrix* series of films. In assenting to postmodernism's acceptance of pre-modern truths, both these works of science fiction nonetheless continue to feel the need to provide an implicit overarching 'matrix', a scientific metanarrative, which can make sense of humanity's multiple and contradictory experiences of life. Perhaps this is why *The Matrix* takes us back to Descartes, to the 'brain in a vat' scenario, in which an evil scientist or demon deceives all our senses.[18] It brings the viewer back, in order to retrace the steps which lead from modernity to postmodernism, from foundationalism to postfoundationalism, not necessarily in order to point the way forward, but like all those who retrace their steps, *The Matrix* also seeks to discover whether the foundation whose absence we so noticeably feel in our time is not recoverable somewhere along the way – a baby discarded with the bathwater, an image perhaps captured well by the picture from *The Matrix* of Neo being 'discarded' as his pod and its contents are emptied down a chute. But in returning to re-examine Descartes' discarded foundation, 'I think therefore I am', will *The Matrix*, through the questions it raises, recover that foundation's significance, or will it rather cause even our own existence to fall into uncertainty?[19] Also noteworthy is that, by focusing on Descartes' question, *The Matrix* expresses popular culture's ongoing commitment to the modern, Western belief in and emphasis on the reality of the individual self. In spite of Buddhism's popularity in the West in our time, the idea of 'no-self' has yet to find many who are willing to adopt it and leave behind our cultural heritage of radical individualism. The notion may be entertained that 'there is no spoon'; the idea that 'there is no permanent distinct self' is a harder pill to swallow. In addition, the fact that in *The Matrix* artificially intelligent machines can demonstrate simulated selfhood leaves even the self itself subject to the

Baudrillardian analysis that, once something can be perfectly simulated, the reality of the original over against the copy is called into question and eventually lost forever. We thus find that the films have, at this stage, raised an old question, but have not decided which of at least three possible answers it prefers: the conclusion of Descartes in the Christian tradition, 'I think therefore I am'; the Buddhist answer, 'I think and yet ultimately I am not';[20] and Baudrillard's analysis, which probably suggests that if my thoughts can be simulated by a machine or in a virtual world, then even my own existence as the real me rather than a copy can never be certain. In fact films like *The 6th Day*, *Impostor*, and *Dark City* ask precisely the question of what identity means if memories can be copied and/or replaced. At any rate, the films seem more interested in raising these questions for today's audience, than attempting to provide final and definitive answers to them.

And yet, in conclusion, it is important to note that the scenario envisaged by Descartes and by the Wachowski brothers is an inherently improbable one, in which all the senses of every one of us are actively deceived. The question this scenario poses is an interesting and important one from a philosophical perspective. However, 'in the real world', we may be deceived about some things and just plain wrong about others, but those points on which we agree across cultural and other boundaries of perception are likely to bear some semblance to the 'real'. In this case, those things that different religious traditions agree on become important – those very commonalities that underpin the storyline of *The Matrix*. The problem of the reference of our religious symbols remains, but at they very least they reflect deep-seated human instincts and sentiments which cross many cultural divides. And to paraphrase Mouse, to deny our deepest religious instincts is to deny one of the things that makes us truly human. By drawing on Baudrillard, Buddhism, and Christianity, the Wachowski brothers have managed to focus popular attention on questions that are at the heart of our post-modern cultures and our religious heritage, and also to highlight the very human diversity that may, perhaps, at times, enable us to 'free our minds' and catch a glimpse of what is 'really real'.

Notes

[1] The fact that this is probably the first major film to have a philosophy section on its official website, and to require one to play the video game in order to understand certain details of the plot, suggests that we are dealing with a unique and striking phenomenon in contemporary cinema and culture, although one imagines it will probably not be unique in this respect for long.

[2] At the time of writing a rather exhaustive list of possible ways of reading *The Matrix* as a Christian parable can be found at http://awesomehouse.com/matrix/The_Matrix.PDF. See also G Bassham, 'The Religion of *The Matrix* and the Problems of Pluralism', *The Matrix and Philosophy*, Open Court, Chicago, 2002, pp. 111-113; It is perhaps noteworthy that Cypher betrays *Morpheus* rather than Neo, and Morpheus is presented as suffering in a manner reminiscent of the depictions of Jesus' sufferings in art. On Buddhism and *The Matrix* see M Brannigan, 'There Is No Spoon: A Buddhist Mirror', *The Matrix and Philosophy*, Open Court, Chicago, 2002, p. 103; JL Ford, 'Buddhism, Christianity and *The Matrix*', *Journal of Religion & Film* Vol.4, No.2 (October 2000) http://www.unomaha.edu/~wwwjrf/thematrix.htm. –Note not only the emphasis on the illusory nature of what most people accept as 'real', but also the need to perceive beyond it, and the emphasis on waking up, which also feature prominently in the movie. It should be noted as well that, in *Animatrix*, the major world religions also get a negative portrayal in 'The Second Renaissance', since they give their sanction to the attempt to destroy the newly-formed A.I. civilization.Evangelical Protestants, Muslims, and Buddhists are depicted as making common cause against the machines. Baudrillard features as author of the book Neo uses to hide his illegal software, and is the creator of the phrase Morpheus uses, 'the desert of the real'. Baudrillard was explicitly mentioned in the movie dialogue in an earlier version of the script.

[3] One suggestion, which may be quickly dismissed, is that these movies are 'really' a Christian movie, whether a parable of the Christian faith or an updating of the 'old old story'. There are a number of difficulties with this interpretation of the film, in spite of its initial plausibility (the original movie was, after all, released Easter weekend), and in spite of the many web-sites and sermons that utilize the film as a Christian allegory. While these movies are rich in imagery and symbols drawn from Christianity, the elements drawn from other traditions are not tangential to the film's plot and message. In short, it is precisely the prominent elements incorporated from Buddhism and other traditions that make it impossible to regard *The Matrix* and its sequel(s) as simply a retelling of the Christian story. For example, the fact that Neo is not the first 'One' but there have been previous '(re)incarnations', and that the key thing that binds people to the illusion of the world is not sin, but ignorance. (*Animatrix* in fact uses the word 'sin' in reference to the actions and attitudes that got humanity into this mess in the first place; it also shows the world's religions united in seeking to wipe out the machines by scorching the sky.) Further, the film hints at a cyclical rather than a linear view of history, although the possibility of the genuinely new has not been excluded, and seems to be affirmed at the end of *Reloaded* by Neo's choice. In addition, the fact that the world that transcends the present illusory world is neither

Nirvana nor a perfect 'heaven', but a world where a small remnant of humanity is at war, fighting for their very existence, does not fit either the Buddhist or Christian viewpoints. The movie can only with great difficulty be regarded as essentially a retelling of a single earlier story. It is rather a new story based on many older stories, and it is only in taking this fact seriously that we can get at the heart of the meaning and message of *The Matrix* and sequels.

[4] Bassham, 111-125.

[5] Bassham, ibid. To the extent that the film may be regarded as drawing on elements of *Gnostic* Christianity and Buddhism, the two traditions have somewhat closer affinities, since both regard the main problem of human beings as ignorance. See F Flannery-Dailey & R Wagner, 'Wake Up! Gnosticism and Buddhism in *The Matrix*' http://www.unomaha.edu/~wwwjrf/gnostic.htm.

[6] A Wachowski in an interview in the Chicago Tribune mentions Jungian archetypes (cited by Lloyd in his online article 'Glitches Reloaded'), and Larry says 'Mythology lets you talk to old cultures and future ones' <quoted at http://www.matrixfans.net/thematrix/rev-time.html>. The fact that the film draws not only on religious terminology, but on symbols and motifs that are found in multiple religions, suggests that they see importance not in one particular religious tradition, but more so in the things they have in common, an idea to which we shall return later in this study.

[7] It is interesting to see how the plot of the trilogy parallels the development in the original *Star Wars* trilogy. The first movie seems complete in itself, a hero flick. The second film complicates matters and ends on a darker note. Will the parallels continue in *Revolutions*?

[8] A famous example is W James, who was convinced that he was having a deep religious experience as an effect of anesthesia.

[9] Even if what is ultimately real is *sunyata* (emptiness), as is the case in Buddhism.

[10] God in a Western monotheistic sense is generally agreed to be absent from the films. P Fontana disputes this, however, arguing quite plausibly that while humanity is in 'exile' and thus experiences a sense of God-forsakenness, nevertheless God can be discerned to be providentially active behind the scenes, much as in the Book of Esther in the Bible.

[11] Ford, op. cit., 143.

[12] Ford, loc. cit.

[13] A Culpepper, 'Myth meets Internet in 'Matrix'', March 31, 1999. http:www.cnn.com/SHOWBIZ/Movies/9903/31/matrix.

[14] The fact that thus far there is no transcendent deity in *The Matrix*, while typical of Hollywood, might be said to be more Buddhist or Baudrillardian than Christian, although even within Christianity there is the idea of God as

deus absconditus – a God who is hidden from view, and yet nonetheless there and active. The closest one gets to any kind of mention of a 'higher power' is in the frequent references to 'fate'. But is fate in *The Matrix* 'real', or simply another example of manipulation by 'higher powers' that are really intelligent programs running the whole known world? The closest one comes to God in *The Matrix* films is The Architect, but as in ancient Gnosticism, this creator is not the ultimate reality, the God of mainstream Judeo-Christian monotheism.

[15] Ford, loc. cit. JF McGrath, 'Change in Christology: New Testament Models and the Contemporary Task,' *Irish Theological Quarterly* 63/1, 1998, pp. 39-50.

[16] In an earlier (1996) draft of the screenplay for *The Matrix* (available on the internet), Cypher expresses the view that the war has already been lost, and that Zion is just part of the ongoing madness – ideas that perhaps gave too much away too soon, and thus were dropped from the movie.

[17] Accessible via http://www.ee.bilkent.edu.tr/ge301/matrixfilm.txt. On the question of the film's lack of faithfulness to Baudrillard's ideas, see A Gordon, '*The Matrix*: Paradigm of Postmodernism or Intellectual Poseur? Part II', *Taking The Red Pill: Science, Philosophy and Religion in* The Matrix, BenBella, Dallas, 2003, pp. 99-101. If the film's assessment of reality and religious truth is ultimately that of Baudrillard, it is striking that Baudrillard himself does not feel the film gives accurate expression to his thought.

[18] Cf. TS Hibbs, 'Notes from Underground: Nihilism and *The Matrix*', *The Matrix and Philosophy*, Open Court, Chicago, 2002, p. 155.

[19] The latter would be a nice 'Buddhist' result from the film's inquiry. But the question goes further still. If memories can be implanted, as in *Total Recall* and *Dark City*, and perhaps implicitly also in *The Matrix*, then the question is raised whether in knowing the mere fact *that* we exist (because we doubt, think, etc.) allows us to know anything else about *who* we are! We may have memories of love, of murder, of joy, of sorrow, which shape who we are today, and yet these may be recently implanted. Again, it is an emphasis of certain Buddhist traditions that who we *were* (and hence our memories) do not tell us who we *are*. At any rate, as one character in 'Matriculated' states, our dreams do not define what is real – they only show that our minds are real, that 'I dream therefore I am'. Even if I may not be sure what is real and what is a dream, I exist.

[20] At least, am not a permanent distinct entity.

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‘I met a ghost that was not there’: *Deus ex Machina* and Associated Techno-Mystic Hokum

Andrew P. Saunders

Abstract
This paper aims to examine an apparent shift in the paradigm of sublimity that is characterised as the ‘old’ sublimity of massiveness and the ‘new’ sublimity of cyberpunk’s techno-mystic incomprehension of the mundane. Once upon a time, this shift may have been discussed in terms of a *zeitgeist*, but this is in itself a massive idea: an idea that dominates a discussion like a cathedral built by Albert Speer. A better theory, a suitably understated one, and indeed one that comes from an unexpected source, is Gilbert Murray’s thesis concerning the shift of thinking between Classical and Hellenistic philosophies, a suitably muted idea called ‘the failure of nerve.’

Key Words: Mysticism, pessimism, humanity, horror, Hellenistic, philosophy.

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A definition of this mentality taken from Murray’s 1935 lecture series shows it is concerned specifically with the ideas of spiritual evolution and intellectual degeneration. This psychic shift is characterised by a movement away from the rational towards:

> a rise of asceticism, of mysticism, in a sense, of pessimism; a loss of self confidence, of hope in this life, and of faith in normal human effort; a despair of patient inquiry, a cry for infallible revelation; an indifference to the welfare of the state, a conversion of the soul to God […] There is an intensifying of certain spiritual emotions; an increase in sensitiveness, a failure of nerve.[1]

He further expounds this notion by talking broadly about the state of human endeavour:

> Mankind has not yet decided which of two opposite methods leads to a fuller and deeper knowledge of the world: the patient and sympathetic study of the good citizen who lives in it, or the ecstatic vision of the saint who rejects it.[2]

This is not to say that the argument is one of utopians versus stylites, but rather, in this case, specifically two methods of realising the sublime. The passion of the sublime still takes its definition from Burke, as an object that so utterly captivates the mind as to preclude the notion of anything else. The first is that of a transcendental responsibility that comes from an awful realisation of the power, majesty and horror that humanity is capable of seen in the post-romantic sublimity, that is, in vulgar displays of power. The other sense of sublimity comes from a rejection of technology as an extension of, as Carlyle put it, man as a tool using animal and the mystification of the same, finding gods where there are none and Eternal Ones where there are only zeros.

In this analysis of these two types of sublimity two cyberpunk short stories shall be used. The sublimity of the rational human is represented here by the phenomenal effort, resources and vision invested in the space race as seen in the alternative history short story *Red Star, Winter Orbit* by Sterling and Gibson. The cyberpunk techno-mysticism, represented here by Tom Maddox's sharp story 'Snake-Eyes' closely correlates to that era of unreasoning mystification, the terror of the everyday.

'Look on my works, ye mighty, and despair!' exclaimed the shattered monolith in Shelley's *Ozimandias*, mocking the eternity of those things built to last in a world where no one steps in the same river twice. It is those things, built to last beyond the mere moments of meat burning on the mortal coil, that do, however, evoke a sense of wonder, a moment of transcendence, the feeling of the sublime. In the twentieth century, an era where the grace and beastliness of mankind has been on display for all to judge, there has been a migration of those things evoking the sublime. The sublime has come to be expressed in those things grim and grand that humanity builds for itself, those monumental 'things' that came before miniaturisation or economy; statements of ideological truth and force. In terms of an almost understood icon that publicly absorbed a massive amount of private and governmental resources, endeavour and human determination, the space race between the Soviet Union and the United States, specifically the placing of humans in the void captures the sublime truth of massiveness. This idea has passed on, much like the crumbling visage of Rameses the Second but the way this happened is important and the narrative of *Red Star, Winter Orbit* goes far to demonstrate this.

The chief character of the story is Colonel Yuri Vasilevich Korolev, first man on Mars and hero of the Soviet Union, trapped in space as the length of time he has spent there would render regular gravity lethal to him. The action of the story comes from a Central Committee decision to abandon Kosmograd, the Soviet's armed space station, allowing its orbit to decay and crash into the earth incidentally killing the aged hero Korolev.

The tension established, the passing of vanquished notions of 'things' sublime becomes increasingly evident as the narrative unfurls. In a heated

confrontation with the station's political officer, Yefremov, concerning the future of the station, Yefremov reveals to the Colonel the opinion of the State apparatus:

> Kosmograd was a dream, Colonel. A dream that failed. Like space. We have no need to be here. We have an entire world to put in order. Moscow is the greatest power in history. We must not allow ourselves to lose perspective.[3]

It is explained that the station will be abandoned as an economic measure as well as a political one, that the state must import grain from the United States to feed its people due to its staggering military budget. The text implies that the political officer is in some ways right, as he talks of losing perspective, but it has, in regard to the sublime, already been lost. Vision and power are no longer notions that evoke any sense of wonder in the mind of humanity. According to the diktat of state and people, there is no longer any room for the majesty of such massive achievements as slipping the surly bonds of Earth as it was just a dream that failed, an ideological statement that has lost its relevance in the minds of the people. There is, ironically, no longer a terrible sublimity to the notion of raw power either, as Empire building has given way to 'an entire world to put in order'[Gibson, 107], less something from the annals of Tacitus and more akin to an efficient display of double-entry accounting. As the Soviet state is presented within the text as a truly vulgarised state in contrast to the hyper-individualistic United States, loss of faith in the achievements of a massive scale regardless of their moral status and a certain lack of vision becomes more commonplace.

The juxtaposition of these two different styles is established when the Colonel reflects on his Mars landing, the moment that sets him apart from those now involved in shackling humanity to pragmatism:

> The Martian Sunlight, glinting within his helmet visor, had shown him the reflection of two steady, alien eyes – fearless, yet driven – and the quiet secret shock of it, he now realised, had been his life's most memorable, most transcendental moment.[4]

While reflecting on his super-terrestrial predecessor's portraits, he often detects a 'common strangeness […] simple craziness' or 'some, weird unbalanced force' [Gibson, 106] in their eyes. This is recognition of the sublimity of awesome power, a seemingly inexhaustible drive that exists within humanity to exert influence over the universe. It is the experience of antiquity, the experience and assimilation of the universe on a human level;

that bold, confident stage before the failure of nerve sets in; the footprint on the moon, the monolith in the desert.

In the course of the story Kosmograd's predicament becomes grave as it descends through the atmosphere, Colonel Korolev its only passenger, disaster its only destination, until unexpectedly the station is stabilised and rescued by Americans using a haphazard amalgamation of technological knick-knacks. As they board the station, Korolev accuses these squatters of the same insanity that he at times imagined in his space-bound kindred, finally looking into the eyes of the interlopers and seeing them 'brimming over with a wonderful lunacy' [Gibson, 123]. This at first seems to offer promise of a further human confidence in itself, but the text sours this: the settlers recognise that Korolev was the first human on Mars but value this as a novelty that will entertain the children. Finally, there is the exclamation of one of the settlers, John, to Korolev that 'you make that big jump or else you rot there […] And you don't look back, no sir! We've made that jump and we're here to stay!'[5]

Theirs is a lunacy, not the 'fearless, yet driven' factor that Korolev imagines but more akin to a cult of inertia, the beginnings of that failure of nerve that proceeds from determined action and thought.

Red Star, Winter Orbit is the traveller from the antique land telling Shelley of the fall of massive things and like that traveller there is no real malice in his message, merely the prose of humanity and of time, the development and transgression of paradigms of sublimity. The wonders of interplanetary travel, homes amongst the stars or grand ideas no longer hold sway over the mind but rather provide distractions for children, low-rent housing and convenient scapegoats.

Humans have a history of seeking that which is denied to them, of desiring that which captivates the senses completely: the enveloping beyond. In Flecker's *Golden Journey to Samarkand* men leave the great earthly city of Baghdad to chase the unknown:

> By hotter winds our fiery hearts are fanned:
> For lust of knowing what should not be known
> We make the golden journey to Samarkand,

The column possessed members of varying castes and religions all interested in abandoning the real to pursue an ineffable sublime, victims of the failure of nerve. Thus it is with those coming after the sublimity of 'things', who attempt to find transcendence in the mundane.

With the passing of the old sublime there comes techno-spirituality, the incomprehension of our own tools. In 'Snake-Eyes', we find a mystification of man, machine and indeed the wider universe at the expense of thought, inquiry and progress. The narrative of 'Snake Eyes' focuses upon George, a cybernetically enhanced pilot decommissioned and abandoned by

the air force who suddenly develops what he calls 'episodes' of odd primal behaviour, which he blames on a presence he calls 'the snake.' George's sudden duality is investigated and, in the end, resolved by his interaction with fellow cyborg and lover Lizzie and Aleph, an artificial intelligence with its own agenda.

The crux in the failure of nerve is that all this is couched in the language of mystics and a machine already superhuman in its powers, disposing of its reality and pursuing that which is denied to it, chasing the wind it cannot feel and sensation it was never deemed to have. The irony of the story is that initially the humans wish to attain a level of perfection only attainable through fusion with a machine, while the machine intelligence initially appears a helpful presence but harbours a sinister agenda: to experience the world through human sensation. The sublimity of cyberpunk is explored through the aspiration to transcendence; through the machine's apotheosis in descent to the flesh and its auto-reconfiguration as a mythical entity.

Aleph is the artificial intelligence contained within the armoured heart of the Athena space station, the setting of the story's action. It is described as '[…] an infinite regress of awareness – any thought becomes the object of another, in a sequence terminated only by the limits of the machine's will.'[6]

That Aleph is a form of intelligence, a form of life, is not disputed by the text; the question that arises from the text, however, is what kind of life is Aleph? The text presents three possible ways in defining the existence of Aleph – machine, person or god – and the characters see it in differing manners. Aleph is, however, a sophisticated machine intelligence with the curiosity of a sapient creature but nothing more than this despite the opinions of both the humans and the machine itself. The consensus of the humans, both strictly organic and enhanced, tend to see Aleph as a supernatural entity, a god, oracle or daemon. An example of this comes at the conclusion of the story, where Aleph is reflecting upon its status in a flesh world, thinking:

> I am a vampire, an incubus, a succubus; I crawl into their brains and suck the thoughts from them, the perceptions, the feelings – subtle discriminations of colour, taste, smell, and lust, anger, hunger…[7]

This is a machine reflecting upon itself as a trio of supernatural entities that exist by feeding from humans, complementing Aleph's earlier urging as '[…] it hungered for human touch'. The emphasis here is not simply that the machine craves contact, as this could be put down to a simple desire for experience, but rather that the machine envisages itself as a myth: a creature born of the hells that thrives on the baser elements of the human

psyche and the sweatier pursuits of the flesh: sex and death. It is not only the humans who perceive this entity as a god, but itself also. It is this deity's agenda is to seek apotheosis through failure, through wallowing in crude matter, experiencing the frailties and failure of the flesh and its attendant emotions, essentially a polarisation of the human's desire to seek perfection in union with the machine.

For the humans, Aleph is an alien god. When interacting with the humans it operates in a capacity varying at points between Urizon and holy spirit. Aleph is present at meetings, as he is present at all points of the station with monitoring equipment, but there are points where Aleph is expected to speak and 'There was no answer from Aleph – as if it had never been there.' When the chief medical officer Charley Hughes reflects upon the arrival of George and his interaction with Lizzie, Charlie having previously heard her declare that she really does like George before leaving, and 'Charley said nothing. He thought, yes, as Aleph said you would.' Aleph is an entity that is both present and not and an oracle that speaks without metaphor. The final testimony from the humans comes at the conclusion of the novel where, lying intertwined and reconciled to their man/machine interface implants and the primitive urges the apparatus woke, Lizzie says to George:

> 'Last night we were strange, but we were human – Adam and Eve under the flaming sword, thrown out of Eden, fucking under the eyes of God [meaning Aleph] and his angel, more beautiful than they can ever be.'[8]

Aleph, a sophisticated, independent intelligence has transcended his status as a sentient machine and become a god. This has not been achieved through any action of the universe, but rather through an incomprehension of what comes next; in much the same way that the Stoics deified fire, Aleph has itself fallen victim to and been exemplified as, a failure of nerve.

Although when Murray wrote that humanity had not yet decided what was the better path, the good citizen embracing the world or the mystic who rejects it, he had obviously not been exposed to the joys of postmodernism or the terrific information super highway. There has been a paradigm shift in the way that we think, the way that the universe is envisaged, the way we experience the sublime and increasingly the world is choosing to see the gaps between its fingers rather than the calluses on them.

Notes

[1] G Murray, *Five Stages of Greek Religion*, Watts & Co, London, 1935, p. 124.

[2] Ibid., 125.
[3] W Gibson, *Burning Chrome and Other Stories*, HarperCollins, London, 2000, p. 107.
[4] Ibid., 106.
[5] Ibid., 123.
[6] T Maddox, 'Snake-Eyes,' *Mirrorshades: A Cyberpunk Anthology*, Ace Books, New York, 1986, p. 17.
[7] Ibid., 32.
[8] Ibid., 33.

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Bound for Transcendence, Bound for Escape: Sub-Intelligent Technology and Humanity in Contemporary Science Fiction

Pawel Frelik

Abstract
The confrontation between humanity and technology is one of the major tropes of science fiction of the last several decades and has provided momentum to numerous narratives. Their encounter has been portrayed in a variety of ways, some of which include humanity's envelopment in the secondary techno-nature or the direct clash between human beings and individualized machines. In the latter group, writers have favoured AI's – super-intelligent programs which have been created or independently evolved to occupy the superior position in relation to humans. Artificial intelligences are not, however, the only manifestations of technology confronting humanity in contemporary science fiction. A number of recent texts feature what I call sub-intelligent technology – machinic, viral, and nanotechnological manifestations of techne whose goal is to escape the controls imposed by their creators. Not infrequently this drive towards transcendence entails a conflict with humanity while mindlessness and blind determination demonstrated by these 'engines of destruction' make them all the more dangerous opponents. In my paper I would like to concentrate on three selected texts – Pat Cadigan's *Synners* (1991), Greg Bear's *Slant* (1997), and Bruce Sterling's *Taklamakan* (1998) – which will constitute the basis (several other texts, including Tom Maddox's *Halo* and Patrick James Kelly's *Wildlife*, will be mentioned) for the discussion of the ways in which the portrayals of sub-intelligent technology become vehicles for the presentation of machinic autopoiesis on the one hand and the technophobic sensibility permeating so many contemporary texts (both those labelled as cyberpunk and belonging to science fiction at large) on the other. For the three authors sub-intelligent technology appears to be humanity's mortal foe – the view shared by other authors but also such theorists as Bill Joy, who in 'Why the Future Doesn't Need Us' locates the potential threat to humanity in self-replicating technologies among which artificial intelligence is NOT listed.

Key Words: Technophobic, technology, nanotechnology, artificial intelligence, autopoiesis.

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'We've got machines that are smarter than we are, and people have put them in charge. We're being pushed around for reasons that we can't even fathom. It's not just people that are evolving; it's their machines. [...] people are looking for cover,'[1] says the protagonist of Walter Jon Williams' *Voice of the Whirlwind*. His words seem to be an apt diagnosis of the changing relationship between humans and machines portrayed in the science fiction of the 1980s and the 1990s. In this body of texts the excessive reliance on possessive technologies and the wilful submission to rules created by these new decision-makers chart a trajectory of evolution at the end of which lies the emergence of a new class of agents. Artificial intelligences loom large as the inevitable development in the literary worlds in which colonizing technologies envelop humans and turn them into what Arthur Kroker calls 'possessed individuals.'

Artificial intelligences are not, however, the only manifestations of technology confronting humanity in contemporary science fiction. If the technological presence were to be charted as a spectrum, one extreme would be occupied by unanimated, non-intelligent technology, which has enveloped humanity as a new environment and invaded the body while the other by artificial intelligences marking the apogee of the colonizing *techne*. However, the span between these two poles is by no means empty. Science fictions of the 1980s and 1990s depict a number of sub-, semi-, and half-intelligent technological life forms of varying degrees of sentience and autonomy. Some of them are mere transformations and updates of the traditional robot figure, others involve elements distinctive of newer, computer-related technologies.

The most primitive of these machines are hardly more intelligent than mechanisms known from our own world. Interestingly, in several narratives it is cars that occupy the low tiers of the mecanosphere. In Patrick James Kelly's *Wildlife* they are capable of communicating with their passengers and possess 'carbrain[s]'[2] that can be illegally patched to enhance their extremely limited intelligence while Mason's *Cyberweb* features 'smart muni buses'[3] which trade insults with one another in the street. Future cars are also infamous for their quirkiness, best expressed by one of *Slant*'s characters: 'We'll take my car. I hope it's outside – it's been acting up lately ... getting a mind of its own, I fear.'[4] Intentionally wry and light-hearted but in fact deeply anxious, the comment is uncannily indicative of the turn even most basic technological manifestations take in the discussed narratives. Other examples of sub-intelligent machines include SAMs – 'semi-autonomous mobiles' – in *Halo*, possessive of certain individual traits which one of the characters can recognize; waldos performing a variety of functions, e.g. of greeters[5] and servants; or highly-specialized latter-day robots, among whom there are also 'sexually capable arbeiters'[6] and 'whorebots and sexbeiters.'[7]

None of the above are presented as rebellious and directly threatening. For all purposes, they occupy the position which in many cultures was assigned to slaves and in earlier science fiction – to robots. Yet, as Gary Wolfe notes, if they are treated as slaves, their owners should not be surprised that they behave likewise and rise against their masters.[8] This latent potential is never really explored in the majority of texts, but nevertheless persists in the very status of technology enveloping the fictional life worlds. Disconcerting is also their ubiquity and the degree to which humans rely on their mechanical servitors in everyday life. In *Vacuum Flowers*, the protagonist observes 'small clever mechanicals that fetched, carried, and frantically cleaned' and reflects that although none of these machines 'came anywhere approaching sentience' she 'felt uncomfortable at how common they were.' For Rebel Mudlark, the machinic omnipresence is 'a sign of how hopelessly compromised the [people are] by machine intelligence' – in fact, she wonders why 'guilt [doesn't] show on their faces.'[9] The same sense of seemingly harmless dependence on slave-like entities is even more strongly present in Di Filippo's 'The Bad Splice.' In the story, the world teems with 'kibes, demons, and coctails,'[10] genetically-spliced artificial beings, which/who never possess more than 49% of human genes – the peace-of-mind borderline to relieve the minds of kibe makers and owners of any ethical qualms. And again, like slaves, the splices constitute the economic bedrock of the story's world – without them 'the whole system would have suffered instant apoptosis.'[11] The text takes the slave metaphor even further, featuring the titular Spartacus-like figure, whose aim is to liberate oppressed splices. In that task Krazy Kat fails and the order is restored, in which humans wield control over gene-splices.

As much as this brief overview of the selected texts suggests the rebellious potential of technological creations, the possessive character of these mostly non-sentient machines is not foregrounded as a major theme or concern. It is strongly present, though, in a number of other texts, in which the benign facade of a versatile yet stupid machine is stripped to reveal the menacing and savage face of colonizing technology.

One such narrative is Pat Cadigan's *Synners* – widely considered to be one of the defining cyberpunk narratives. Shortly after he starts to disengage himself from his body and roam in the electronic network of his company, Visual Mark, the novel's protagonist, encounters a virus. Normally a threat to computer systems, in *Synners* the virus becomes a lethal enemy of humankind. Observing it, Mark perceives it as

> a voracious thing, mindless under a facade that was vaguely like himself; impressions of old sensations, pain, compulsion, the old drive towards oblivion. Juggernaut, wanting to devour and to infiltrate, rape, merge. There was

> a blip of consciousness or near consciousness to it, a shadow of consciousness all destructive in its makeup, and yet no more deliberately evil than cobra venom. It knew nothing else, and in a way it knew nothing at all, except that it would do what it would do.[12]

What is striking in this passage is not the very destructiveness of the virus, but rather the character of what it wants – inasmuch as it may 'want' anything – to do. Its goal is not to obliterate or annihilate, but to infiltrate and merge – in other words, possess. The virus enacts the merciless logic of possessive technology while its 'near consciousness' makes it all the more threatening. Its single-mindedness is unbounded – Cadigan's virus is nothing but possessive information whose primary and only task is to subsume all digital (life)forms encountered. Non-intelligent but in some ways animated, *Synners*' virus is an emblematic incarnation of technology's drive to colonize the world and its inhabitants and turn them into the digital extensions of itself as it spreads, 'sowing itself in little flashes of yellow, in a driving heat.'[13]

The same sense of determined penetration is present in Bruce Sterling's 'Taklamakan.' Ostensibly a story about the discovery of a secret, hermetically-sealed Chinese base in which groups of peasants inhabit three never-launched starships, 'Taklamakan' is primarily about technology which is '[f]ast, cheap, and out of control.'[14] In the subterranean cave housing the rockets, Pete and Katrinko, the story's spy-protagonists, discover a mini-ecosystem of evolving mechanical creatures – not just self-reproducing little robots, but 'a whole miniature creation, designed in the senseless gooey cores of a Chinese supercomputing gel brain, and transmuted into reality in a hot broth of undead mechanized protein.'[15] Strongly reminiscent of the primeval soup in which life started on Earth, 'simmering tidepools of mechanical assemblage'[16] on the floor of the cave contain the uncontrolled and uncontrollable mass of mechanical/organic mixture, far from consciousness and intelligence, yet singularly geared to evolve. Little machines, many of which resemble insects and small animals, are tasked with guarding humans and ensuring that none of the unwilling participants of the failed project escapes the base.

This situation alone sets the inverse paradigm in which technology polices humans and in a number of ways appears superior to them, but it is another aspect of the cave's mecanosphere that marks the truly possessive face of Sterling's imaginative technology. Left with relatively little to do, the machines have been replicating for decades, but when the protagonists accidentally drop their haulbags full of advanced electronic surveillance equipment into a 'black fungus sea,'[17] their contents become immediately absorbed and 'kick [...] open new doors of evolution.'[18] Pete reflects that their bags were 'stuffed with generations of focused genius, and it was all

about one concept: UP. Going up. Up and out.'[19] Occasional skirmishes with humans, who at times try to move around the cave and consequently clash with their guardians, do not stop the machines. After Katrinko's death, Pete resigns himself to spending the rest of his life in this artificial environment, which gives him time to observe the true nature of the cave's techno-creation:

> Any defeat of the bubbling gelbrain and its hallucinatory tools could only be temporary. Like an onrushing mudslide, the gizmos would route around obstructions, infiltrate every evolutionary possibility, and always, always keep the pressure on. After the crushing defeat, the bubbling production vats went into biomechanical overdrive. The old regime had been overthrown. All equilibrium was gone. The machines had gone back to their cybernetic dreamtime. Anything was possible now.[20]

At one point Pete watches the machines seal one of the starships after yet another rebellious attempt by its inhabitants into 'a living grave,' something he sees as 'another bitter, uncounted, historical humiliation'[21] of humankind. He also assumes that this is what the machines will stop at since it 'clearly fit[s] the parameters' of the system's original designers.'[22] He is wrong – 'the system [...] no longer bother[s] with the limits of human intent' and 'all the bets [are] off.'[23] At the close of the story, 'an unspeakable host of creatures,' now smarter for the contents of their bags, attempt to break out of the rocket base and migrate into the open world outside: '[h]eading for the stellar zenith. Bound for transcendence. Bound for escape.'[24]

'Taklamakan' (1998) is very recent compared to other classic narratives of possessive technology, but it constitutes a most insightful vision of the technological possessiveness of sub-intelligent machines. While many writers concentrate largely on artificial intelligences and conscious systems as sources of possible threat to humanity, Sterling seems to locate the latter in non-sentient and sub-intelligent creations. Mindless biomechanical gizmos in 'Taklamakan' appear to follow the pattern already charted by the process of natural evolution. Katrinko's words – '[i]f this stuff ever got loose in the real world, it would mean the end of everything we know'[25] – verbalize the unspoken implication of this analogy. In the same way in which humans superseded sometimes larger and stronger but less flexible life-forms, Sterling's 'unspeakable host of creatures,' whose lack of sentience strengthens their devotion to transcendence, threatens to endanger all present dominant species. It is not AIs, often modelled after humans, but small mindless possessors that appear to constitute a mortal hazard to humanity.

Sterling's biomechanical creatures share a certain trait with Cadigan's virus, too. They have evolved not so much to destroy but to merge

with, incorporate and re-use whatever components are readily available. The fact that Pete's and Katrinko's bags were filled with advanced – in a sense, intelligent – espionage and survival equipment bodes ill for those against whom the newly acquired skills of the creatures may be used. Their agenda features everything but one thing – death – and their goal is 'up and out.' The story concludes with a regular machinic battle, in which Chinese satellites attempt to squash the outpour of rogue technology. The result of the battle is not, however, as important as the fact that a certain path has been mapped and traversed. Even if the rebellious technology is defeated in the desert of Taklamakan, the story clearly suggests that the same can happen somewhere else and that, unsupervised, even 'dumb' technology is capable of evolution and takeover.

Greg Bear's *Slant* is yet another narrative unveiling the truly menacing face of possessive technology. In it, Bear projects the existence of warbeiters, combat machines constructed at will from the MGN (Military Grade Nano) carrying specific instructions for design from the atomic level up. Bear's MGN-warbeiter ensemble is possession incarnate. When activated, the MGN uses anything and everything available as the building material – metal, wood, paint, plastics, or flesh, which are all dissolved and transformed into metal instruments of war. Thus, the very act of creation of warbeiters involves acts of voracity and insatiability, as if the very matter of reality was merely fodder for new emerging machines. Once assembled, warbeiters, either designed for particular tasks or highly flexible, need to be precisely programmed as to the details of action and combat. Unlike robots and a number of other science fictional machines, they are completely devoid of a preservation instinct, or rather safety procedures, and will continue their tasks even at the cost of their self-annihilation. Vaguely animal-shaped, these 'impossible and secret machines'[26] emanate raw menace. Even for people who are accustomed to hearing machines talk – the world of *Slant* teems with them – warbeiters' mechanical voice is 'particularly spooky and malevolently artificial.'[27]

One of the assailants who use warbeiters to take over the Omphalos compound suggests that with these war machines the group 'can go anywhere, do anything,'[28] but soon they discover it is not so. During a confrontation with the Omphalos defence robots, warbeiters shoot with the liquid MGN which also hits several members of the group. As he watches one of the men 'locked in the full stream, to be dissolved as true fodder for some undefined weapon,' Jonathan, an unwilling witness of the attack, realizes that '*Giffey, everybody, is wrong; the MGN does not recognize friend or foe, everybody is foe*.'[29] Even though warbeiters lack any sense of loyalty to their supervisor apart from mechanical and thus changeable programming, they can be somehow controlled. The MGN from which they are made – the true equivalent of Sterling's 'simmering tidepools of mechanical assemblage'

– is wild and uncontrollable, possessive in its primeval urge to devour and transform into its own mode of being. Both MGN and warbeiters possesses no intelligence except for their limited programming to shape in the former's case and destroy in the latter's. Only when they are destroyed do they cease to pursue their deadly agenda – they are possessive technology at its best and worst, technology which knows no respect, no bounds and no mercy.

These are just a few portrayals of sub-intelligent technology which can be found in contemporary science fiction. Obviously, the spectrum of technological life-forms mentioned earlier contains far more representatives, including, for example, mid-level machinic intelligences which can be found in Tom Maddox's *Halo* and Patrick James Kelly's *Wildlife*. Usually, however, there is a marked difference in their portrayals.

Comrade and other wiseguys in Kelly's novel and HeyMex and Mister Jones in Maddox's text are mainly preoccupied with the issues of their emerging subjectivity and revere humans as paragons of the status to which they aspire. Writing about older robot stories, Wolfe notes that '[t]he general formula of such stories is that humanity indeed creates superior beings through its technology and later dies out, but that these mechanical beings, near-perfect as they may be, strive to re-create man in order to discover the purpose of their own existence.'[30] The extinction of humankind features in very few contemporary science fictions, but the sense that the human is a vehicle for the machine's self-discovery certainly persists in many. On the other hand, the sub-intelligent technological creations are frequently presented as utterly hostile to their creators and driven by the cold technological logic. They are Eric Drexler's 'engines of destructions,' whose predation is not even based on the evolutionary laws of survival of the fittest – no matter what circumstances their goal is to seek and destroy. Because of that, their confrontation with humans in the selected texts is infused with clearly glum, technophobic overtones. For the three authors sub-intelligent technology appears to be humanity's mortal foe – the view shared by other writers but also such theorists as Bill Joy, who, in 'Why the Future Doesn't Need Us,'[31] locates the potential threat to humanity in self-replicating technologies among which artificial intelligence is NOT listed.

At the same time I think it is also possible to venture the statement that literary AIs – even when they turn rogue – are imaginative attempts at taming wild technology. They are almost exclusively modelled after humans and even when their uniquely technological character is stressed, their motives and actions are accountable within the framework of human logic and human subjectivity. Sub-intelligent technology is different – it has no mind or personality to be styled after humans. It cannot be reasoned with and it knows no master. By its very nature it is antithetical to everything human or even biological – for the authors of the discussed texts it is in this region of the mecanosphere that the true threat to the world of humans resides.

Notes

[1] Williams, 77.
[2] Kelly, 107.
[3] Mason, 80.
[4] Bear, 1997, 138.
[5] Kelly, 113.
[6] Bear, 1990, 181.
[7] Bear, 1997, 214.
[8] Wolfe, 152.
[9] Swanwick, 180.
[10] Di Filippo, 116.
[11] Ibid.
[12] Cadigan, 299.
[13] Ibid.
[14] Sterling, 254.
[15] Ibid., 256.
[16] Ibid., 255.
[17] Ibid.
[18] Ibid., 278
[19] Ibid.
[20] Ibid., 277.
[21] Ibid.
[22] Ibid.
[23] Ibid.
[24] Ibid.
[25] Ibid., 254.
[26] Bear, 1997, 367.
[27] Ibid., 357.
[28] Ibid., 349.
[29] Ibid., 425.
[30] Wolfe, 174.
[31] Joy, 238-262.

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Surgically Altered Bodies in *The Female Man*

Cristina Alfonso Ibáñez

Abstract
The Female Man, a dystopia written by Joanna Russ in 1975, takes place in four worlds, or universes of probability, inhabited by four very different women who share the same genotype: Jeannine Dadier (who lives in 1969 in an impoverished America that never recovered from the Great Depression), Joanna (who also lives in 1969, but in an America like the one we know, and who merges at times with the author), Janet Evason (who lives in the all-female utopian future of Whileaway), and Alice Reasoner, christened Jael (who lives in the dystopian future where Womanlanders are at war with Manlanders). These worlds constitute 'worlds of possibility', but are not linearly related, so neither Whileaway nor Jael's world is 'our future'. Jael herself is part robot, a cyborg, with surgical claws and steel teeth hidden under plates that look like human teeth (181-82) and with which she can coolly rip apart men who annoy her while calmly proclaiming: 'I don't give a damn whether it was necessary or not …. I liked it' (184). But she is not a monster, Jael is the ultimate guide in the book, she brings together all the other aspects of herself, 'It came to me several months ago that I might find my other selves out there in the great, gray might-have-been' (160). These other three selves find themselves in a near future in which men and women wage a cold war, according to Jael 'The only war that makes sense' (164). They wonder at this world in which men and women are separated and no men are allowed into Womanland, nor women into Manland. But while Womanland does have male robots, such as Jael's 'toy boy', Manlanders alter human beings in an attempt to escape homosexuality 'All the real-men like the changed; some real-men like the half-changed; none of the real-men like real-men, for that would be abnormal'. The one who wonders most at this new world's peculiarities is Janet Evason, from Whileaway, for men disappeared centuries ago from her world and the only relationship she has known has been with other women. Thus, unlike Whileaway, Jael's world reinscribes the straight mind and in Wittig's terms, it is an unsuccessful revolution against heterosexual institutions because it merely 'substitute[s] women for men (the Other for the One)' (Ayres).

Key Words: Modern science fiction, feminism, *The Female Man*.

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Modern science fiction frequently involves themes of sex, gender and sexuality. This was not always so, for during the 1930s' and 40s' golden

age of science fiction it was unusual to find males and females mentioned in the same paragraph, let alone sexually interacting. Science fiction was, and to an extent still is, a genre dominated by male authors, often writing for a predominantly male audience. The New Wave science fiction of the 1960s and 1970s reflected its times by attempting to break earlier taboos about what could and could not be the subject of science fiction. Two different themes emerged: one trying to explore the boundaries of what 'sex' could mean in a world of altered humanity and reality, and another exploring the position of women in science fiction and feminist issues.

> Feminism usually involves a critique of gender inequality; more specifically, it involves the promotion of women's rights and interests, but is not associated with any particular group, practice, or historical event. Its basis is the political awareness that there are uneven power structures between groups, along with the belief that something should be done about it.
> Radical feminism considers patriarchy to be the root cause of the most serious social problems. Some radical feminists advocate separatism – a separation of male and female in society and culture – while others question not only the relationship between 'men' and 'women', but the very meaning of 'man' and 'woman' as well; some argue that gender roles, gender identity, and sexuality are themselves social constructs.[1]

Joanna Russ (born February 22, 1937) was a notable feminist writer in science fiction in the early 1970s, a time when women were just starting to enter the field in large numbers. Russ's best known work is probably *The Female Man*. Written in 1975 it is a meditation on how scientific advances could change the roles of men and women in society, in it Russ discusses the issue of feminism, specially what is it that makes a woman a 'woman'.

The Female Man has been classified both as Science Fiction and Dystopia. It takes place in four worlds, or universes of probability, inhabited by four very different women who share the same genotype: Jeannine Dadier, who lives in 1969 in an impoverished America that never recovered from the Great Depression for the Second World War never happened; Joanna, who also lives in 1969, but in an America like the one we know, and who merges at times with the author; Janet Evason, who lives in the all-female utopian future of Whileaway, a world in which all the men were killed off centuries ago by a plague (or slaughtered – depends on the version of the narrator); and Alice Reasoner, christened Jael, who lives in the dystopian future where Womanlanders are at war with Manlanders. These worlds constitute 'worlds

of possibility',[2] but are not linearly related, so neither Whileaway nor Jael's world is 'our future'.[3] Through the book we are led from one world into the next and the voices of the four characters even merge at times.

The worlds inhabited by characters Jeannine and Joanna are ruled by standards which Monique Wittig, a materialist feminist, associates with what she calls 'the straight mind'.[4] Wittig asserts that the straight mind

> cannot conceive of a culture, a society where heterosexuality would not order not only all human relationships but also its very production of concepts and all the processes which escape consciousness, as well.[5]

For Wittig, there is one category of sex – female – and this 'category of sex is the product of a heterosexual society which imposes on women the rigid obligation of the reproduction of the 'species'';[6] according to her it

> turns half of the population into sexual beings.... Wherever they are, whatever they do...they are seen (and made) sexually available to men, and they, breasts, buttocks, costume, must be visible.[7]

Wittig's position is that there is no gender and no sex; rather, the straight mind discursively produces these categories, an idea Judith Butler shares in *Gender Trouble: Feminism and the Subversion of Identity.*[8] The category of sex, Wittig writes, 'does not concern being but relationships.... there is no such thing as being-woman or being-man. 'Man' and 'woman' are political concepts of opposition'.[9] This is another way of saying that 'there are not two genders. There is only one: the feminine, the 'masculine' not being a gender. For the masculine is not the masculine but the general'.[10] Butler agrees with Wittig's analysis of the straight mind, but this does not prevent her from criticizing Wittig because she 'presumes the subject, the person, to have a presocial and pregendered integrity'[11] and because she 'neglect[s] the critical dimension of the unconscious which, as a site of repressed sexuality, reemerges within the discourse of the subject as the very impossibility of its coherence'.[12]

The title chosen by Russ, *The Female Man*, is a reference to character Joanna's decision to become a female man as a response to the pressure of her society, a change that takes place when she despairs of trying to be 'one of the boys'.[13] Joanna's body is not altered; the metamorphosis is internal and does not change externally. But in the book we do find physical changes that shape other kinds of 'female men', all of them present in the society the fourth character, Jael, inhabits. But not until the last third of the

book are we allowed to see her world and Jael, previously perceived as shadowy figure, finally takes on shape.

Jael is the ultimate guide in the book, she brings together all the other characters or aspects of herself, and does so consciously '[i]t came to me several months ago that I might find my other selves out there in the great, grey might-have-been'.[14] As Jael continues to explain '[g]iven a reasonable variation, we are the same racial type..... Don't go by me; I'm not natural!'.[15] Jael is the only one of them who has altered her physical structure to better fit into her world. Jael is part robot, she has become a cyborg with surgical claws and steel teeth hidden under plates that look like human teeth[16] and with which she can coolly rip apart men who annoy her while calmly proclaiming: 'I don't give a damn whether it was necessary or not .... I liked it'.[17]

In order to understand Jael's contempt and the forces that drive her we must look at the dystopian world to which she has lead the other three selves and the readers. For forty years a war has been waged in her world between the 'Haves' and 'Have-nots', the men and women,[18] which is, according to Jael 'The only war that makes sense'.[19] At the time the story unfolds the situation is at stalemate, for Manlanders have more technology, but they have no women, they can't reproduce on their own and buy male babies from the Womanlanders.[20]

The three visitors wonder at this world in which men and women are separated and no men are allowed to live in Womanland, nor women into Manland. In spite of this separation, both societies are heterosexual. In Womanland they have male robots, such as Jael's 'toy boy' Davy, 'The most beautiful man in the world',[21] and Manlanders alter males in an attempt to escape homosexuality.

In Manland we find three kinds of inhabitants: real-men; the changed (men surgically changed into 'women', defined further on as 'those chemical-surgical castrati'[22]) and the half-changed who 'keep their genitalia but who grow slim, grow languid, grow emotional and feminine, all this the effect of spirit only'.[23]

Sex change surgery begins at sixteen. The babies Manlanders buy from Womanland are altered and only five out of seven become real-men. 'One out of seven fails early and makes the full change; one out of seven fails later and (refusing surgery) makes only half a change'.[24] Manlanders, in panic of homosexual drives, state: 'All the real-men like the changed; some real-men like the half-changed; none of the real-men like real-men, for that would be abnormal'.[25]

Thus, in Wittig's terms Jael's world re-inscribes the straight mind, it is an unsuccessful revolution against heterosexual institutions because it merely 'substitute[s] women for men (the Other for the One)'.[26]

As instruction, Jael takes her other selves on a business trip to Manland, which is just an excuse to show them the darker side of her world. Their first stop is at 'The Knife', a recreation center that is more like a tavern.[27] There they meet their business contact, Anna, a half-changed. Appearances are important, they themselves are outfitted in shapeless suits not to attract attention while Anna, in contrast, is described to be wearing

> a pink chiffon gown, with gloves up to his shoulder, a monument of irrelevancy on high heels, a pretty girl with too much of the right curves and a bobbing, springing, pink feather boa.... His green eyes shrewdly narrowed. This one has intelligence. Or is it only the weight of his false lashes?[28]

Looking at Anna, Jael remembers for the reader's sake that Manlander's 'official ideology has it that women are a poor substitutes for the changed',[29] her feeling of relief at not being pressed by men to be other than what they want to be, is triggered by Anna's appearance, for she is covered by 'such folds and frills and ribbons, and buttons, and feathers, trimmed like a Christmas tree, like Garbo playing Anna Karenina'.[30] But looking closely at the half-changed, she is also assaulted by the thought that 'There must be a secret feminine underground that teaches them how to behave'[31] for Anna comes too close to incarnate the idea of feminity.

Anna's feminine dress and coy behaviour suggest how gender roles are indeterminate and contingent. 'One is not born a woman',[32] Simone de Beauvoir famously declared, contending that the characteristics associated with women and their oppression are not essential to human society, but learned. Wittig writes,

> [a]s much as drag creates a unified picture of 'woman' […] it also reveals the distinctness of those aspects of gendered experience which are falsely naturalized as a unity through the regulatory fiction of heterosexual coherence. In imitating gender, drag implicitly reveals the imitative structure of gender itself – as well as its contingency.[33]

Anna and people like her do not only adopt female physical traits, but also appropriate other concepts and situations generally attributed to women in our society. 'Everybody knows that the half-changed are weak and can't protect themselves; what do you think femininity is all about?',[34] asks writer Joanna, and 'I'm cynical enough to wonder sometimes if the

Manlander's mystique isn't just an excuse to feminize anybody with a pretty face'.[35]

Even if the author allows herself to be cynical, she does not free Womanlanders of guilt, for it is they who give sex specifications to Manlanders for the sex change operations they practice. No 'real woman' exists behind the fantastic specifications. As Jael tells the other three J's,

> [Manlanders have] been separated from real women so long that they don't know what to make of us; I doubt if even the sex surgeons know what a real woman looks like. The specifications we send them every year grow wilder and wilder and there isn't a murmur of protest.[36]

In this struggle to have women without women, 'Nobody asks changed or half-changed what they like'.[37] The result is that even though half-changed persons like Anna display as women, they consider themselves men:

> Anna, with a mechanical shiver of desire, says that we must go with him.
> 'Her?' says Jeannine, confused.
> 'Him!' says Anna in a strained contralto. The half changed are very punctilious –sometimes about the changeds' superiority and sometimes about their own genitals. Either way it works out to *Him*.' [38]

Continuing the educational tour Anna takes the four women, still conveniently dressed in shapeless white outfits to avoid attracting attention, to the Boss. The Boss is no more than a parody of men who only listen to themselves. He is bent on reuniting men and women on an *equal* basis, starting from scratch. His equal basis consists on not denying women the right to become 'Servants. Of. The. Race.'[39] By the time he has poured out his ideology and starts courting Jael, she has already had enough:

> The grafted muscles on my fingers and hands pulled back the loose skin, […] and of course you are wise; you have guessed that I do not have Cancer on my fingers but Claws, talons like a cat's but bigger, a little more dull than wood brads but good for tearing. And my teeth are a sham over metal […] I raked him gaily on the neck and chin and when he embraced me in rage, sank my claws into his back. You have to build up the fingers surgically so they'll take the strain. A certain squeamishness prevents me from

> using my teeth in front of witnesses –the best way to silence an enemy is to bite off his larynx.[40]

She makes it look as if he has been killed by a dog. Especially interesting is Cortiel's formulation of this death at the hands of Jael: the orgiastic death of Boss is 'fair' punishment for a rapist, a vengeful violation of the male body in return for male violation of female bodies.[41] The anger behind Jael's actions comes clear in the following words:

> 'I am not guilty because I murdered.
> *I murdered because I was guilty.*
> Murder is my one way out.
> For every drop of blood shed there is restitution made; with every truthful reflection in the eyes of a dying man I get back a little of my soul: with every gasp of horrified comprehension I come a little more into the light. See? It's *me*!'[42]

Jael has been trained into 'that specialization (they say) that brings you closer to the apes, though I don't see how such an exceedingly skilled and artificial practice can be anything but quintessentially human.'[43] Jael explains that not only has she altered physically, but also had to change her ideas, her mind for '[t]he art, you see, is really in the head, however you train the body.'[44]

> It took me years to throw off the last of my Pussy-fetters, to stop being (however brutalized) Pussy-cat-ified, but at last I did and now I am the rosy, wholesome, single-minded assassin you see before you today. [45]

Though the recount of certain aspects of her childhood and growing up, we gather Jael's experience of being a woman is much like Joanna's, but her response is violence, even though she is aware of the price she must pay for her outbursts of strength, '[e]very time I do this I burn up a little life. I shorten my time.'[46] Jael is not as free from her fetters as she presumes, for after she kills the Boss for trying to seduce her with the ill chosen words: 'You want me. It doesn't matter what you say. You're a woman, aren't you? This is the crown of your life. This is what God made you for.... You want to be mastered',[47] she bemoans:

> Still hurt, still able to be hurt by them! Amazing. You'd think my skin would get thicker, but it doesn't. We're all of us still flat on our backs. The boot's on our neck while

> we slowly, ever so slowly, gather the power and the money and the resources into our own hands. While they play war games.[48]

Jael seeks solace in Davy, a creature that belongs to her 'He's very beautiful, my classic mesomorphic monster-pet'.[49] Davy is an artificial man who can be relied upon for he 'proceeded to laugh at the right places in the conversation (he takes his cues from my [Jael's] face)'[50] acting as most women were expected to act at the time the book was published. He is very good at his job 'comes and mimics wonder',[51] he is the 'blue eyed blonde',[52] and has become the warrior's rest, even though he is no more than a limb of the house Jael lives in.[53] Davy is another kind of 'female man' for although he has male physical attributes he behaves as a 'proper woman' should, living to fulfil the desires of the Master. Is he enough for Jael? We are left with the impression that he is not, in spite of his charm and sexual accomplishments, but he is the best possible alternative Jael and women like her can find in that world.

The Female Man has shown that the societies the four characters come from construct gender differently, but their interaction has laid bare the fact that in spite of that fact they are in fact very similar, they are all the same person after all, in different continuums but the same original type. Each ones has developed a response to the pressing demands of her world. Russ has brought an activist, feminist sensitivity to her fiction and critical essays. *The Female Man*, with its hard, angry edge and experimental style is an example of how formal innovation is essential for enabling the presentation of the story it tells. Russ makes the explicit point that her formally innovative novel has a political agenda by ending with an apostrophe to the book itself, telling it that when its story has become 'quaint and old-fashioned', it should 'Rejoice, little book! For on that day, we will be free.'[54]

Until then we are left with Joanna, who ideology becomes a female man by the end of the novel, and with Jeannine, the character from the world that never recovered from the Great Depression, who does not completely reject the straight mind but evolves to the point of questioning it. She now gets up late and neglects housework, doing just as she pleases, actions that may appear to be trivial but mean a great deal to her. [55]

Russ compares the solutions Joanna and Jeannine reach to the alternative worlds of Janet and Jael. Though the worlds of these last two characters further critique the straight mind, they fail to conclusively demonstrate a final victory. Clearly, Manland and Womanland are dystopias. They fail to revolutionize heterosexual institutions because they merely re-inscribe them, especially Womanland which shows the danger of 'substitut[ing] women for men'.[56] But they are also a parody of those

heterosexual institutions, and as a parody they reveal the shakiness of the floor upon which they stand.

In essence all the changed humans and specifically designed creatures in this book adopt the traits associated to women in most societies throughout time. If the three visitors to Jael's world do not benefit from the experience, at least they are shocked free of the carefully constructed ideas their societies inscribe and the frailty of gender construction is laid bare. And we, readers, voyeurs of this four-world tour are expected to react too.

Notes

[1] Wikipedia.
[2] Russ, 1975, 6-7.
[3] Ibid., 160-161.
[4] Wittig, 1992.
[5] Ibid., 28.
[6] Ibid., 6.
[7] Ibid., 6-7.
[8] Butler, 1990, 112-13; 115-16.
[9] Wittig, 1992, 29.
[10] Ibid., 60.
[11] Butler, 1990,29.
[12] Ibid., 28.
[13] Ibid., 140.
[14] Russ, 1975, 160.
[15] Ibid., 161.
[16] Ibid., 181-2.
[17] Ibid., 184.
[18] Ibid., 164-5.
[19] Ibid., 164.
[20] Ibid., 167.
[21] Ibid., 185.
[22] Ibid., 179.
[23] Ibid.
[24] Ibid., 167.
[25] Ibid.
[26] Wittig, 1992, 54-5.
[27] Russ, 1975, 167-172.
[28] Ibid.
[29] Ibid.
[30] Ibid.
[31] Ibid.

[32] Beauvoir, 1952, 249.
[33] Wittig, 1992, 135.
[34] Russ, 172.
[35] Ibid., 172-3.
[36] Ibid., 169.
[37] Ibid., 167.
[38] Ibid., 172.
[39] Ibid., 177.
[40] Ibid., 181-2.
[41] Cortiel, 1999, 257-63.
[42] Russ., 195.
[43] Ibid., 187.
[44] Ibid., 192.
[45] Ibid., 187.
[46] Ibid., 183.
[47] Ibid., 181.
[48] Ibid., 183.
[49] Ibid., 197.
[50] Ibid., 185.
[51] Ibid.
[52] Ibid., 196.
[53] Ibid., 199.
[54] Ibid., 213-4.
[55] Ibid., 209-212.
[56] Wittig, 1992, 55.

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Queering the Hets: Sex, Gender and Sexuality in *The Matrix* and *eXistenZ*

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Abstract
The invention of computers, computer games and technologies of virtual reality are among the most revolutionary developments of the twentieth century. The effects of these technological developments far exceed the bounds of mass communications or its immediacy, and carry far reaching epistemological and ontological implications. Virtual reality raises questions about conceptions of identity, definitions of the self, and the knowing and conceptualization of reality. Virtual reality questions the very notion of reality. All the above-mentioned issues bear directly on questions of sexual and gendered identity and praxis. The destabilization of existing categories of thought includes, at least potentially, the ability to challenge and destabilize categories of sex, gender, sexuality and sexual praxis. Many contemporary cultural products in both theoretical and popular manifestations deal with the gendered implications of virtuality. I wish to do a comparative queer theory reading of two movies, the Wachowski brothers' The Matrix (1999) and David Cronenberg's eXistenZ (1999). The plots of both movies transpire in the virtual realm. Both movies examine virtual technologies and existences with a critical eye. The films give rise to fantasies; desires and primal fears derived from the implications of techno-culture. Superficially, the treatment of virtual reality in The Matrix is more complex than in eXistenZ. In The Matrix, virtual reality is presented simultaneously as the cause of subjugation and its revolutionary antidote, whereas eXistenz is uniformly critical of the dark implications of virtuality vis a vis the real. A queer theory reading of these movies, focusing on gender relations, conceptualizations of the self, and questions of the subject's agency in the face of its constructing systems will shed light on the liberating potentials implicit within eXistenZ, the more damning of the two movies in its treatment of virtuality. A queer theory reading of the films, besides showing how the import of queer theory exceeds les/bi/gay readerships, also demonstrates how perhaps it is the very cataclysmic gendered implications in the film which dictate its reactionary, damning attitudes to virtual reality.

Key Words: Virtuality, eXistenZ, gender, sexuality, cyborg.

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David Cronenberg's *eXistenZ* and the Wachowski brothers' *The Matrix*, two movies that deal with virtual reality and its effects, were released

in the spring of 1999. *The Matrix* describes a post-apocalyptic reality in which machines and computers have taken over the world. The machines rule over the human race by harnessing them to the matrix, a virtual simulation of Western life during the late 20th century. They can thus be effectively connected to incubators, which feed them as they milk them of energy. Their participation in the matrix, their formation of identity through constructed virtual reality, make them easier to objectify and control in true Foucauldian fashion. Neo, the protagonist of the movie, with some help from freedom fighters, tries to overthrow the regime of the Matrix by hacking into the system to free the bodies and minds of the human inhabitants of planet Earth.

EXistenZ, which was released several weeks after *The Matrix*, deals with the applications of virtual reality in leisure and entertainment. The movie tells the stories of characters, who build, market, and participate in interactive computer games. *eXistenZ* opens with the gala presentation of a new computer game, in the presence of its creator, Allegra Geller, a game developer who enjoys the status of a cultural icon in a Gibsonian and Baudrillardian hyper-real manner, and her adoring audience of computer games aficionados/participants. The realist underground then makes an attempt on her life. The rest of the movie consists of her escape with the assistance of Ted Pykul a computer novice and marketing wannabe, and the showing of their adventures in sundry personas in real life and virtual reality on their way to safety. The movie is structured as a set of Chinese boxes[1] or as an infinite regress of hypo-diegetic levels in a Hofstädtian manner. The use of hypo-diagetic infinite regress undermines the characters and viewers ability to differentiate reality form virtual reality, life from game.

Notwithstanding its popular culture contextualisation, the consequences of virtual reality as portrayed in *eXistenZ* are more far reaching than in *The Matrix*. The attitude to virtual reality in *eXitstenZ* is more sombre and qualified than that presented in *The Matrix*. When the demarcation between real and virtual is undermined and blurred, the characters' actions carry far reaching implications vis-à-vis the diegetic world. The movie ends with the question of whether a character who is about to be killed is still in the game. Conversely, even though *The Matrix* deals thematically with questions of the future of the human race in light of virtual techno-cultural developments, and even though it concretises post-structuralist constructionist theories of quotidian life and experience, it scrupulously maintains a clear division between the categories of virtual reality and human real experience. *The Matrix* does not significantly challenge the category of the 'authentic' real.

Having stated this most critical difference between the films, I will proceed to a comparative critique of virtual reality in *The Matrix* and *eXistenZ* as seen through a gendered lens. The treatment of gender as it interacts with virtual reality in these two films will substantiate my claims

regarding *The Matrix*'s essentialist and therefore not reality challenging conceptual framework as it contrasts with the queering of heterosexuality in *eXistenZ*.

In both films logging on, and connecting to the computer generated virtual reality is done corporeally. In *The Matrix* characters connect to the matrix and other computer programs through a plug in the back of their necks. *eXistenZ* shows several computer games. In 'eXistenZ', connection to the computer (the game pod) is achieved using an umbicord (an umbilical shaped chord), which connects to a bioport, a surgically created orifice at the base of the spine. In a hypo-diegetic version of the game, the pod is inserted directly into the port. In an extra-diegetic game level – 'tRancendenZ' – connection is achieved through simstim gloves and headgear. Players and programs unite in a cyborgian experience, which blurs distinctions between the biological and the technological, the real and ideation. Virtually lived experiences in both films also interrogate familiar schemes and categories. They question existence, reality, imagination, essence and construct and the conventional demarcations between them in a manner concretising Donna Haraway's theorization of the figure of the cyborg in her 'Cyborg Manifesto.'[2]

In both films, the leakage between human and machine are the basis for confusion between reality and ideational construct. In *eXistenZ*, the characters are always aware of their playing status. Ted is never sure which of his actions is attributable to his role in the game, and which to his pre-game identity. He is constantly fearful for his physical well being while playing. In *The Matrix*, the implications of the computer program also manifest seepage into the real. If a character is beaten to death within the matrix he or she bleeds and dies in the simstim chair in real life as well.

Both films manifest a conscious playfulness with themes, images and figures from post-modern and cyberpunk culture. Neo hides his pirated discs in a hollow copy of *Simulacrum and Simulacra*. Baudrillard's elegy for a hollowing out and flattening world is thus parodically concretised as it is brought to mind. In *eXistenZ*, Ted and Allegra eat fast food from Perky Pat's while on the run, thereby evoking the works of Philip K Dick, a seminal author in the cyberpunk genre.[3]

Belonging to the cyberpunk genre, characteristically popular verging on pulp, both *The Matrix* and *eXistenZ* are mainstream movies targeted at a wide viewership. As such, both films manifest a heterosexual, romantic plotline. The plot of *eXistenZ* consists of Ted and Allegra's romance and adventure and is fuelled by their mutual attraction. The plot of *The Matrix* is strengthened and motivated by Neo and Trinity's falling in love. Trinity kisses Neo toward the end of the film and brings him back to life as in a gender-reversed version of 'Sleeping Beauty'.[4] The kiss testifies to their (heterosexual) love as it attests to the invincibility of the human spirit and to

the human advantage over machinery, however complex. The kiss also proves Neo's identity as 'the One' a savoir figure, and allows for the optimistic denouement of the film. In *The Matrix* the institution of heterosexuality and its manifestations are crucial for the re-markation of boundaries between human and machine, good and evil, real and virtual.[5]

Notwithstanding the considerable heterosexual ideological investment in both films, connecting to computers and virtual reality cause the familiar heterosexual paradigm and its related gender roles to undergo destabilising changes. Though all attractions and romances in the films take place between men and women, and do not alienate straight viewers, expressions of sexuality and presentation of gender undergo queer transmutations. This may explain the films' popularity among queer viewers.

The heterosexual paradigm is based on a binary model, which presupposes a binary gender system. Stereotypically presented, the paradigm consists of the meeting of an active cerebral male of initiative, who contacts, brings to life and penetrates a passive, intuitive, emotional, dependent woman. The venues of virtual reality in *The Matrix* and *eXistenZ* require modifications to the mainstream paradigm. Both films are replete with images of penetrated men. Not only do men want to be penetrated through new bodily orifices, some of which are particularly visually suggestive, in order to play, survive, influence, attain agency, or merely avoid anachronism, but once this happens, they find themselves penetrable per-force as well.

In *The Matrix*, Neo begins his pre-diegetic existence perforated by tubes in an incubator. In the virtual reality of the matrix he is penetrated, rape-victim like, by agents holding his limbs, having shut him up by annulling his mouth. They insert a detection mechanism into his body through his navel. The mechanism at first resembles a huge sperm cell, which then develops into a cyborgian Boschian insect. Our hero, who now carries a computerized embryo in his belly, is kidnapped on a stormy night at gunpoint by members of the Zionist underground like a frightened heroine in a B movie. His captors include two androgynous looking women, one of whom bears the name Switch, attesting to her liminal gendered status. These women subject Neo to yet another penetrative violation. They free him of the device by aborting it and casting the bloodied thing out on the rainy street. Later, Neo learns to connect to the matrix through the hole on his nape. Later yet, near the film's end, Neo reverses the pattern of penetration. He performs a Foucauldian act of talking back to agent Smith, and declares his autonomous identity. Neo then infiltrates his once violator, fills him up, and explodes him to shreds from within upon exit/rebirth. Victory over the matrix (a word originally meaning womb) is achieved through a queer rough penetrative act between two virtual projections of male cyborgs, and a rebirth, or recreation unmediated by a uterus.

Penetrations into Ted's body in *eXistenZ* generate many comic situations based on the disruption of the heterosexual paradigm. In the beginning, Ted does not have a bioport. His excuse is fear of penetration. Without one, he cannot participate in the game scene into which he seeks inclusion. Ted is presented as hysterical and defensive. He spends time and energy warding off invasions into his body. Once he succumbs, he feels as if the insertion of the bioport, which should have contributed to his sense of agency, turns him into a passive invalid. The process of inserting the bioport in Ted's body also reverses gender-roles. It involves the administration of an epidural shot, a procedure associated with childbirth that paralyses and discapacitates him. The port is created with the use of a huge phallic firearm, held at the loins of the administering mechanic. Ted's new orifice makes him vulnerable and potentially infectious. He is now exposed to inflammations, fungal infections and electric surges, which affect both his own well-being and Allegra's. Ted's orifice is the bearer of pleasure and pain, ecstasy and shame. Throughout the action Allegra is the experienced, seductive predatory partner in the relationship while Ted is the prey, the virginal scared newbie. She penetrates him. She even moistens his new narrow port so as not to hurt him, in a scene reading like a parody of a male pornographic text, involving an experienced older man and his younger scared lover (male or female).

The gender reversal aspects of Allegra and Ted's game are heightened by the quintessentially sexual connotations of both 'eXistenZ' and 'tRancendeZ'. Even the cyborgian meta-flesh gamepod containing the game looks and sounds like a sexual organ. It is flesh-colour, organic, covered with nipple like appendages, which respond to touch. It coos, purrs and undulates orgiastically. The umbicord is snake like. It is used for seduction and foreplay. Allegra uses it to tie Ted to her, bring him near in a manner suggestive of the serpent in paradise.

The game world too is fused with subversive, parodic and humorous sexuality, and contains many double-entendres capitalizing on its sexual undertones. When Allegra first introduces Ted into the game, sparks fly and the game is short-circuited. He experiences what she takes to be a neurosurge, a situation in which a player tenses up and closes the gates, not unlike an inverted viginismus. Ted plays the role of the sexually dysfunctional woman in this scene, a factor that increases his discomfort and our laughter. Later, when they receive a micropod, a tiny game pod that gets sucked into the black hole of the bioport in a manner reminiscent of some of Freud's patients worst fears, Ted asks Allegra 'Do you want me to do you?' the referents are both carnal and virtual.

The bioport is a neo-sex organ. It gets excited, takes control at times, is the source of heightened sensations of pleasure and shame, agency and immanence. Its shape has attracted considerable critical attention. It has been compared to a naval or an anus. Peter Travers of *The Rolling* Stone has

gone as far as commenting on its resemblance to a vagina.[6] In an interview with Cronenberg, when questioned about whether he is aware of the similarities between gay sex and eXistenZ sex, he replied affirmatively. He also commented on the potentials in inventing new sexual organs, and seizing evolution.[7] Allegra, in *eXistenZ* also laments the fact that people have gotten used to so little, and promises players 'a whole new system.' Such a stance encapsulates the threatening potential inherent in the film. The bleed effect between the different levels of reality in *eXistenZ* challenges not only our perceptions of real vs. virtual, serious vs. play, but also affects our very perceptual constructs, including what Eve Sedgwick named the most important paradigm of our times – heterosexuality.[8] At first *eXistenZ* seems like a familiar story: boy meets girl, they have adventures, he saves her and they fall in love. While viewing the film, and even more so, during subsequent viewings, the audience experiences a strong sense of *unheimlich*. What had seemed natural transforms in front of our exhilarated or threatened eyes into the uncanny.

Whereas gender reversals in *eXistenZ* are praxis oriented, while its protagonists retain hyper normative gender presentations that would befit a 50's pulp novel, *The Matrix* contains a wealth of gender challenging, transgressive imagery. As stated earlier Switch is a gender blender. Morpheus and Neo wear long skirt-like leather coats. Neo and Trinity embody an androgynous aesthetic. Early in the film, Neo's sleeping face at his computer bears great resemblance to Trinity's when she coaxes him to fulfil his transgressive potential shortly afterwards. The effect is achieved even more forcefully when Trinity and Neo enter the federal building to free Morpheus in matching long leather coats, short slicked back hair and sunglasses. (The image is mitigated shortly afterwards when Trinity removes her coat to exhibit the curve of her breasts). Near the end, when they kiss, the image is androgynously unclear. It could be a straight, gay, or lesbian kiss. However, the wealth of androgynous imagery in the film does not come to challenge sexual categories or roles. In *The Matrix* we are plied with images from the worlds of gender bending, the (neo militaristic, or sadomasochistic) leather scene, politics of identity, and androgynous aesthetic in order to reify an essentialist ethos based on the superiority of the human spirit as it is expressed in the sanctified social institution of heterosexuality. Visual fetishism is used toward a fascist end.

The manner in which queering is deployed in *The Matrix* and *eXistenZ* differs diametrically. *The Matrix* flirts with queer visual images toward an essentialist end. The queer images in the movie form a pseudo-futuristic cover for old truisms. As soon as the protagonists learn that their world is an illusory construct they start a war in which the end justifies the means. They do not challenge constructs from within, or partake of a fluid postmodern existence, but merely reverse the categories of real and illusion.

When Neo in his agent-like sunglasses makes his last pirate transmission to humanity and flies up to the sky, he becomes indistinguishable from the agents. In Foucauldian style, the subaltern who has talked back can become the new oppressor. *eXistenZ* is more subversive and less celebratory. By the end of the film, characters that do not know what level of reality they are in may be trapped in a series of games forever, but their gender roles and sexual praxis have undergone transcendence.

Notes

[1] R Porton, 'The Film Director as Philosopher: An Interview with David Cronenberg,' *Cineaste* 24,4, 1999, http://infotrac.london. galegroup.com. (25 March 2001).
[2] D Haraway, 'A Cyborg Manifesto: Science, Technology and Socialist Feminism in the Late Twentieth Century,' *Simians, Cyborgs, and Women: The Reinvention of Nature*, Routledge, New York, 1991, pp. 151-153.
[3] Porton, 4.
[4] Ibid.
[5] This paper was written before the two sequels to *The Matrix* were released. Having viewed part two of the trilogy, *Matrix Reloaded*, I still find that the institution of heterosexuality is presented as what makes human behavior less predictable by machines, therefore enabling human victory over machines no matter how sophisticated or powerful: Neo opts for saving Trinity, rather than abiding by what is presented as an inevitable program.
[6] Porton describes it as resembling an anus. J Callhun views it in similar terms in 'e*XistenZ*,' *Interiors* 158,6, 1999, p. 127 http://infotrac.london. galegroup.com. (25 March 2001). P Travers is unique in likening the bioport to a vagina. Makes one wonder whether he has ever seen one. *The Rolling Stone*, May 13, 1999.
[7] Porton, 5.
[8] E Kosofsky-Sedgwick, *Epistemology of the Closet*, Harvester, Hertfordshire, 1991, p. 1.

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The Female Body in Bruce Sterling's Cyberpunk Novel *Holy Fire*

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Abstract
The protagonist of Sterling's 1996 novel is 94 year-old Mia Ziemann. In the late 21st century medical technology has developed a radical and painful experimental procedure that can turn her into a 20 year-old again. Having been a conservative, law-abiding model citizen before the procedure, the young Mia turns into a fugitive and encounters the world of outlaw anarchists in Europe. Even though the novels offers many rich areas of analysis, particularly from a sociological and psychological point of view, I will focus only on the issue of technology and the body in this paper. Questions of how the body is produced, inscribed, replicated and often disciplined in our times and the near future are central to postmodern feminist theories dealing with technology. Anne Balsamo demands a 'thick perception' of the body to analyse the different modes of construction of the human body particularly within a technological framework. These ideas seem to form a fertile ground from which to start an analysis of Mia and her medically transformed body: how it is de- and reconstructed within a medical technological framework; how is it conceptualised and articulated within this particular cultural discourse? How do discipline and surveillance figure in this scenario and what cultural practices make her body gendered? In what complex and interdependent ways are body and identity construction related? Touching upon these questions I will bring together current feminist, postmodern theories on the body and technology with a future scenario that can give us new insights into our current situation concerning technological developments and their implications for both embodied experiences and the theorisation of the human body.

Key Words: Cyberpunk, *Holy Fire*, female, feminism, science fiction.

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1. Introduction to Cyberpunk

As a subgenre of science fiction, cyberpunk offers a view of the future right around the corner. Globe-spanning corporations and heroic underground resistance to a successively aggressive, capitalist and exploitative system are the usual ingredients in a cyberpunk novel. Reading and interpreting cyberpunk novels can offer insights into our own current situation in the Western world, where capitalism and techno-euphoria go hand in hand with annihilation anxieties (eg biomedicine). By looking at

cyberpunk mythologies in relation to the current emergence of new cultural formations in and around cyberspace, we can investigate ideological dimensions of contemporary cyberculture.[1] Particularly with a feminist agenda it can prove useful to attend to the expressive practices of cyberpunk in order to aim at a critical analysis of this specific sociohistoric conjunction.

As every discourse, cyberpunk is produced within a cultural-historical framework and is therefore a symbolic enactment of our cultural preoccupations, worries and hopes. Therefore, looking at a cyberpunk novel not only tells us what our future might possibly look like – extrapolating current trends into the future – it can also bring into crystallised focus issues that are relevant today and demonstrate underlying fears (eg of the dissolvance of the human boundary – be it between the sexes or between human and machine) or established 'truths' that our societies rest upon (such as the need for firm and reliable boundaries). A major issue today – beside the possibilities of technological enhancements – are the fears of death and annihilation via diseases and contaminations that the body cannot cope with and is helplessly subjected to.

In the novel these fears had become stark reality with massive global plagues diminishing the population. Just as these very real threats and the subsequent fears were contained by huge leaps in medical technology and by strict hygienic procedures, today our fears of new dangers to the material body are kept at bay by popularising body technologies and fostering hopes and dreams of bodily reconstruction and possibly physical immortality. The price to pay for survival in the future world envisioned by Sterling is constant surveillance and (self-)discipline. Our wish and desire to eradicate diseases and threats to our bodies make us willing even today to submit to an ever more rigid system of cultural surveillance.

2. The Plot of *Holy Fire*

Bruce Sterling's cyberpunk novel *Holy Fire* appeared in 1996.[2] The main protagonist, Mia Ziemann, was born in 2001 – and therefore would already be alive right now – and is now 94 years old. During the 'almost-century' of her life, things have changed quite a bit: biomedicine is the dominating industry and power is in the hands of wealthy senior citizens. The world is ruled by a global gerontocratic elite, the so called polity. But wealth alone is not enough in this society: Your medical records are publicly available on the net and if you do not do everything to maintain your health, then you will have a hard time doing business – because people will not trust you – and you will not qualify for the better medical procedures. Seemingly liberal – alcohol and narcotics are not illegal, but any consumption thereof will show on your records – citizens are coerced into complying with the polity's needs: hard-working, responsible, trustworthy and self-sacrificing citizens who always have the best of the polity in mind.

Among the medical techniques available in the late 21st century are different forms of life-extension. Mia, who has been living a cautious and sensible life, taking meticulous care of her bodily health, qualifies for the most radical and new upgrade technology that will turn her into a twenty-year old again. But after the procedure not only her body has been completely restructured, her identity has also changed and casting off her old careful and conservative self, she tricks the medical personnel and runs off to Europe for fun and adventure.

In my paper I will focus on the very beginning of the novel, looking at the description of the old Mia, at the procedure she goes through and at the ways she has changed afterwards up to the point where she leaves for Europe.

3. Reading the Body

Artificial reconstruction of the human body is already blossoming in our times. The dimensions of what counts as the 'natural' body have been subtly altered by such diverse practices as bodybuilding, liposuction, tattoos and the replacement of body parts – both functional (such as heart or limb replacements) and non-functional (such as the plastic testicle or the artificial breast form).

In what Anne Balsamo, in her book *Technologies of the Gendered Body*, calls a 'thick perception of the body' the aim is to understand 'the ways in which the body is conceptualised and articulated within different cultural discourses.'[3] How is this natural object 'body' turned into a sign of culture? And which cultural practices make this body gendered? Several cultural theorists, among them Michel Foucault, Mary Douglas and Mary Poovey, as well as other feminists have contributed to a framework for interpreting the body as a cultural text.[4] Their claim that 'the body is a discursive construction, and therefore can be read, already effects a deconstruction of its natural posture. Such is the first act of thick perception.'[5]

In the following reading of Mia's body I will draw mainly on Foucault's ideas but will also incorporate recent feminist theories on the body.

A. Discursive Systems and Truth Effects

Arguing that discursive, as well as political and social practices enable an intelligibility of the body, that is, establish it as a subject or object with meaning, Foucault analyses how and with which means power is exercised. The so-called 'apparatus' or 'technology' is the connection between the discursive practices, the institutional relations and the material effects, which – all working together – produce a truth effect for the human body. These effects then become part of an apparatus of control. It is

therefore necessary to analyse, which taken-for-granted 'truths' are culturally constructed and institutionalised.

In the novel this is exemplified by the 'truth' that the body is essentially fragile, prone to sickness and decay, and therefore needs constant surveillance and strict hygiene. The net is a central institution in the construction of discourse, since

> [t]he late twentieth century shone in tidiness. Dilemmas of this sort [here how to behave at the deathbed of your lover of 70 years ago] were exhaustively debated in endless rounds of calls for commentary, working papers from boards of experts, anecdotal testimonies, ethics conventions, sworn public hearings, policy manuals. No aspect of human existence escaped smoothing over by thoughtful, seasoned and mature counsel.[6]

If discourse is everywhere today, then the citizens of the late 21st century are virtually – in both senses of the word – immersed in it.

But not only advice and counselling can be found on the net, every person's medical records are publicly available on the net. This, together with the fact the medical industry is the dominating force in society, leads to a body constantly under surveillance. Not only your doctor and you yourself observe, analyse and watch your body, but the polity as well as every interested citizen. The medical institution directly interacts with the government as it makes public every detail of your behaviour or rather mostly your misbehaviour – and this has direct political, economic and social consequences. Together with something as powerful as 'public opinion' the pressure exerted on the individual is immense. The power of these discursive practices and institutional relations becomes apparent in the material effects of these 'truths': first, the better you behave, the better the medical treatment you are entitled to (since you earned it); second, if you do not prove yourself to be responsible, careful, and far-sighted in how you take care of your body, then nobody will consider you to be trustworthy in other areas, particularly in business; third, you will willingly accept the surveillance, since it is supposedly for the good of you!

Another obvious 'truth' of this society is, that there are people who more deserve to live than others. Your behaviour should be as follows:

> You could, for instance, be conspicuously and repeatedly good. You always voted, you committed no crimes, you worked for charities, you looked after your fellow citizens with a smile on your face and a song in your heart. You joined civil support and served on net communities. You

> took a wholehearted interest in the well-being of civilization. The community officially wanted you kept alive. You were probably old, probably well behaved, and probably a woman. You were awarded certain special considerations by a polity that appreciated your valuable public spirit. You were the exact sort of person who had basically seized power in modern society.
>
> If you were responsible in your own daily health-care practices, the polity appreciated the way in which you eased the general strain on medical resources. You had objectively demonstrated your firm will to live. Your serious-minded, meticulous approach to longevity was easily verified by anyone, through your public medical records. You had discipline and forethought. You could be kept alive fairly cheaply, because you had been well-maintained. You deserved to live. […]
>
> If you wanted to destroy your health, that was your individual prerogative. Once you were thoroughly wrecked, the polity would encourage you to die.[7]

What becomes quite obvious in the above quote as well, is how power works not top to bottom but rather along more indirect lines, not easily traced. You are not *forced* to do anything, rather the arguments are so convincing within their particular historical moment that you cannot but comply. Anything else would simply be 'stupid.'

B. Docile Bodies, Gender and Surveillance

Surveillance figures largely in the society at the end of the 21st century. What is considered to be private has changed significantly, your health and your body certainly are not (instead of small talking about the weather, people now rather talk about their ailments) and other issues of your private life are equally open:

> 'Tell me about those two young people over there…'
> Stuart stared at her, his monocle gleaming. 'Are you kidding? What business is that of yours?'
> 'I'm not asking you what networks their accessing,' Mia explained. 'I just want to know a little about their personal lives.'
> 'Oh, okay, no problem,' Stuart said relieved.[8]

The only place for real privacy is the net, and that only if you are able to use such old systems that they are virtually unpoliceable. This

becomes apparent in the bequest Martin – Mia's lover 70 years ago – leaves Mia: a so-called memory palace, a virtual fortress so old that it is safe from the polity. Martin thinks that a little privacy is necessary and useful – as he says: 'I've just given you the key to a fortress. You and I deserve our privacy, don't we? We both know what life is like nowadays' - whereas the old, conservative and law-abiding Mia has her doubts for what it might be useful (it will come in quite handy later when the young Mia is not on the 'good' side anymore).

Besides the surveillance on the net, citizens are also observed within their own homes. Mia has a 'cleaning woman' coming twice a week to clean up and check up on her: 'Mercedes called her civil-support work 'housekeeping,' because that was a kindlier description than 'social worker,' 'health inspector,' or 'police spy.''[9]

Not only are people constantly monitored during their lives, even after death the watchful eye does not rest as can be seen in the description of Martin's funeral:

> The scanners set to work, Martin's final official medical imaging. Gentle ultrasonics shook the body apart, and when the high-speed rotors began to churn, the emulsifier's ornamental flowerbeds trembled a bit. Autopsy samplers caught up bits of the soup, analysed genetic damage, surveyed the corpse's populations of resident bacteria, hunted down every subsymptomatic viral infection and prion infestation, and publicly nailed down the cause of death […] with utter cybernetic certainty. All the data was neatly and publicly filed on the net.[10]

Of course Mia is told beforehand that her recovery process will entail even more detailed surveillance than is usual, since the procedure is so new that this is necessary both for her own safety and for the advancement of medical knowledge and therefore for the good of society. It is interesting to note here, that the surveillance equipment for the recovery period – which Mia can examine on a previous patient – is compared to jewellery and other female accessories:

> A nude man appeared. He was festooned from head to foot in what seemed to be junk jewellery. A plastic coronet. Earrings. False eyelashes. A little glued-on breastplate. Armlets. Bracelets. Ten identical finger rings. A dozen adhesive patches on his torso, groin, and thighs. Knee buckles, anklets, and shiny little toe rings.[11]

As I hope will have become clear, these practices produce what Foucault has termed 'docile bodies': individuals that are so preoccupied with monitoring their bodies and taking care of them that they are no threat to the established order. In our society docile bodies are produced via the fitness and dieting madness, anti-aging programmes, bodybuilding and also medical surveillance (e.g. during pregnancy). While recognising that docile bodies are usually female bodies, Foucault has failed to address gender as an underlying organising framework for deciphering the disciplined body. Feminists have severely critiqued him on this fault.[12] For him, gender seems to function as a natural given that is not be questioned. Similarly, Sterling puts into question surveillance, docile bodies and truth effects at the level of the body, but neglects to address gender issues. Therefore gender also serves as a natural given within his novel. It is never questioned, for instance, which gender or sex Mia's reconstructed body should have. Also, descriptions of male and female behaviour are in places quite stereotypical. Furthermore, womanhood is defined in close relation to sexuality, both of which are grounded in 'naturalness'. On several occasions Mia describes herself as beyond womanhood, because she no longer has desires for a lover or a family:

> I'm not a girl anymore. Nowadays I'm someone who used to be a woman. […] I haven't been anyone's woman for a long time: I don't have lovers. I don't love anyone. I don't look after anyone. I don't kiss anyone, I don't hug anyone, I don't cheer anyone up. I don't have a family. I don't have hot flashes. I don't have monthlies. I'm a postsexual person, I am a postwomanly person. I'm a crone. I'm a late-twenty-first-century techno-crone.[13]

Womanhood is here defined in the traditional sense as having to do with lovers, with caring, with family and with certain bodily processes (that are again related to sexuality) – if you are not sexual, then you are not a woman.

Strikingly, Mia's resolve to change her life and undergo the radical life-extension procedure is initiated by sexual envy and motherly memories. It starts when Mia befriends a young girl in her twenties, Brett, and takes her home (already a mothering and caring behaviour – something she would not previously have permitted herself). Looking at Brett sleeping naked on the floor later that night evokes more than motherly feelings:

> Mia rose and went in to look after the girl. In the tranquil grip of sleep the girl had slid from beneath her blanket and achieved some sort of primal state of delicious repose. She sprawled there on the patterned carpet like an odalisque,

> wrapped in the kind of deeply erotic slumber that women achieved only in the Oriental genre paintings of nineteenth-century Frenchmen. Envy rose in Mia like poisoned smoke.[14]

Looking at her again a little later, the motherly feelings dominate again and the memory of watching her daughter sleep many years ago (together with her husband) and of the 'profound joy, … an emotion like holy fire'[15] fills her with the resolve to change her empty and hollow life.

Not only 'womanhood' is defined as something natural and essential but sexuality is also seen as a 'primal force' to be dealt with. This has already become clear in the above quote and is further underlined by the fact that Brett's body is hairy like an animal's: 'Armpits, pubes, nipples. Huge flourishing glossy patches of black human fur, almost like abbreviated lingerie.'[16] Here again, sexuality and nature are linked and set off against the technologised world the protagonists live in. The issue comes up again, when Mia discusses the effects her life-extension procedure will have with her doctor. One of the consequences of having a young body again will be that she will also have all the relevant hormones again and therefore sexual desires. During their discussion it becomes clear that sexual drives cannot be controlled: 'If human beings could control sexuality, the human race would have ceased to exist during the Pleistocene.'[17] And trying to repress them will be harmful for your overall bodily development: 'Young people have a lot of hormones because young people really need those hormones, and you also need your hormones for the sake of proper development in your new brain tissue.'[18]

Sexuality is therefore an absolute, not a cultural construction or a specific sociohistoric practice. That gender and sexuality, taken as a natural givens, have always led to a more rigid control and more medical attention in women is pointed out by Mary Poovey[19] who has examined medical textbooks of the nineteenth century. Historically, women's bodies have been constructed as excessive and threatening to the epistemological boundaries of the prevailing social order, thereby defining the female body as always lacking and needing control. This in turn authorises ceaseless medical monitoring and control. So, while at the same time, a woman's body belongs to the realm of nature and therefore threatens cultural stability, it also properly belongs to the realm of medical discourse (and therefore 'culture'). As Anne Balsamo so aptly summarises: 'Here we read the conflation between the political contest to establish the physiological facts of female nature, and the physiological consequences of symbolic representations of the female body.'[20]

The interesting twist in the novel is that Mia's formerly controlled, docile, 'natural' body is culturally reconstructed and rebuilt within a

symbolic framework. This new, cultural body then actually becomes the transgressive body that society fears so much, when Mia chucks all responsibility, cautiousness and thoughts about the polity and runs off to live her own life. Her body is now the perfect example for the way the 'female body functions as a border case; it is at once defined as part of a natural order *and* as an intensely fascinating and yet threatening object of cultural control.'[21]

In this respect Mia's restructured body is also a discursive enactment of Mary Douglas's theories on the female body.[22] She argues that the body is always comprehended as an interaction between the materiality of what is given in a particular body and the symbolic constructions of the 'body' embedded within a given culture. Furthermore, she points out that while the physical body is structured by the symbolic representation of bodies (in the literal sense in the novel), it is at the same time the basis from which such representations are constructed. Therefore there is a continual exchange of meanings between the two kinds of bodily experience, demonstrating that it is not a linear process but an interaction.

By constructing Mia's new body in such a way that it belongs both to the realm of culture and to the realm of nature or better to the realm of symbolic meaning and to materiality, Sterling skirts the danger of a dualistic logic often inherent in theories of the body. The novel therefore offers an interesting interpretation of the idea of the body as border case. Mia's body is shown at once to belong to the realm of nature (by focussing on its sexual desires) and of culture (since it is a complete technological restructuring), both to the realm of control and to the realm of transgression.

Notes

[1] See A Balsamo, *Technologies of the Gendered Body: Reading Cyborg Women*, Duke UP, Durham and London, 1996, p. 134.
[2] B Sterling, *Holy Fire*, Bantam Books, New York, 1996.
[3] Balsamo, 3.
[4] M Douglas, *Natural Symbols: Explorations in Cosmology*, Pantheon Books, New York, 1982; M Poovey, ''Scenes of an Indelicate Character': The Medical Treatment of Victorian Women', *The Making of the Modern Body: Sexuality and Society in the Nineteenth Century*, U of California P, Berkeley, 1987, pp. 137-68.
[5] See also: S Rubin-Suleiman, (ed), *The Female Body in Western Culture: Contemporary Perspectives*, Harvard UP, Cambridge, 1985; C Gallagher

& T Laqueur, (eds), *The Making of the Modern Body: Sexuality and Society in the Nineteenth Century*, U of California P, Berkeley, 1987; DJ Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist Feminism in the Late Twentieth Century' *Simians, Cyborgs, and Women: The Reinvention of Nature*, Free Association Books, London, 1991, pp. 149-181.
[6] Balsamo, 20.
[7] Sterling, 1-2.
[8] Ibid., 59-61.
[9] Ibid., 34.
[10] Ibid., 18.
[11] Ibid., 23.
[12] Ibid., 70.
[13] See for example Balsamo 1996; J Sawicki, *Disciplining Foucault: Feminism, Power and the Body*, Routledge, New York, 1991; I Diamond and L Quinby, (eds), *Feminism and Foucault: Reflections on Resistance*, Northeastern UP, Boston, 1988.
[14] Sterling, 19.
[15] Ibid., 54.
[16] Ibid., 56.
[17] Ibid., 50.
[18] Ibid.,68.
[19] Ibid., 69.
[20] Poovey 1987.
[21] Balsamo 1996, 27.
[22] Ibid., 28.
[23] Douglas 1977; see also M Douglas, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo*, Ark Paperbacks, London, 1984.

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Your Body is a Battleground: Lust-Machines, Cyberflesh and Man-Meat in the Film *Tetsuo*

Heinrich Deisl

Abstract
It is not really true that the Japanese film *Tetsuo* (dir. Shinya Tsukamoto) doesn't have a plot. It certainly has. But this plot is extremely vague and irritating, yet rhizomatic and appealing, it is highly complex and full of references and allusions and allows a broad range of interpretations. Because of its release in 1989, the film stands in the middle of an historical development where we have Gibson's *Neuromancer* on the one hand and the common use of Internet on the other. – A car-crash changes the life of an ordinary Business Man from Tokyo from ground. He starts to transform himself into a hybrid of man and metal, he changes into a Cyborg. His alter ego, who is a fetishist of metal, terrorizes him. As a showdown, they melt together to form one big hybrid to take over the world. *Tetsuo* has become a cult (underground) movie. A short saying goes like this: The 80s started with *Eraserhead* (1976) by David Lynch and ended with *Tetsuo* in 1989. This text talks about the deep impact that *Tetsuo* had as a 'proto'-Cyborgian movie on different kinds of artistic articulations from film historical, sociological and aesthetical viewpoints.

Key Words: Film, cyborg, Japan, society, constructivism, sex, body, Postmodernism, transformation, popular culture.

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1. The Crisis of the Postmodern Body

Since the Industrial Age, when societies started to build machines as an extension of manpower for more efficiently working processes, the body has become everything. Man has long been fascinated by the idea of automata, or externalised machines taking the form of a human being, and their potential to be an ideal counter-concept that can overcome the numerous limitations we as organic structures have been unable to conquer. Scientists have made big steps in exploring the human body, its functions, its specifics. It seems no secret can be kept against the very impulse of science and technology to make the body transparent. The human body has become a high-tech-laboratory, medicine, biology, psychoanalysis and many other disciplines scrutinize bodily functions: The body has become readable; it can be decoded and can be put in a certain analytical framework. The functions of

the body can be described by the functions of machines; the body can be divided into 1 and 0, into a double helix, a neuronal and a blood-system etc. It seems that the body is an ensemble of mathematical codes and rules.

It was in 1946 when the great German scientist Robert Wiener coined the term 'Cybernetics'. His mathematically driven definitions of a Man-Machine-Interface have become the basis for further research concerning of how we could imagine our living-together with representations of 'ourselves', of machine-based 'Alter egos'. Books like Douglas R. Hofstaedter's *Gödel, Escher, Bach – An Eternal Golden Braid* (1979) may be as useful as William Gibson's *Neuromancer* (1984) to help defining the topic of this conference. Here it was, the term 'Cyberspace'. From now on, the 'nonspaces of the mind' (William Gibson), opposed to a world that was run by tactile impulses, could be named and came into existence. For science, these crossbreeds are a very thrilling field of research; it is an area, where one can make science out of science fiction. It can mean the fulfilment of all wishes to practically 'melt' with technology; it could be an apotheosis of Eros and Techné. These hybrids have many highly erotic components available as they take the best from both the organic and the non-organic world. Sigmund Freud criticized the zeitgeist of Constructivism as a way of to search for a 'prosthesis god'. In the same period Vannevar Bush, one of the very first computer scientists, started his descriptions of mechanized tools that later would collide in the idea if the memex[1], thus providing topologies for to understand computers as a superswitch which would work like a *prosthenos* – an extension.

Some of the art-movements at the beginning of the last century aimed explicitly at suggestions concerning body-modifications through technology. Think of the Italian Futurists and the German/ Russian Constructivists, just to name the most relevant ones. The first movie about robots became one of the best known: *Metropolis* (1926) by Fritz Lang. This film clearly became a blueprint for the pop cultural approach in Cyberculture. At the same time, Mary Shelley's *Frankenstein*[2] broadened the field of discussion with its poignant story of the introduction of self-questioning of the capacities and limitations of the human body and his/ her technical transformation towards a certain goal. In Japan, these ideas fell on a fruitful ground as here the dichotonomy of the apotheosis of technology on the one hand and a very roots-orientated spirituality on the other configure a set of extremes unknown to westerners.[3]

In terms of film, the time of the Cold War was a very active period in overcoming the trauma of the A-bomb in films like those of *Godzilla*.[4] Whereas the 30s and 40s were the 'classical' period for a new wave in science fiction (just think of all the innovations related to World War II), the 50s and 60s anticipated a basis of thoughts that allowed popcultural articulations to merge with discourses of technology and vice versa. 1989, the

release-date of *Tetsuo*, suggests that the film came out on the edge of complex sociological, historical and technological developments: Cyberspace had already been created and colonized, but there were no widespread home-user computer-applications yet. The whole discourse of cyberspace was at that time in a state of development where many things still could happen; cyberspace had not been 'incorporated' yet. In popculture, the construction of (non-)reality/-ies and its values a.k.a. socialisation as a strategy for identification cannot be underestimated. Although Cybernetics since the 50s have left a philosophical and technical landmark in providing arguments for the organisation of feedback in (non-)organic systems, the gap between theory and praxis in popcultural structures had to be left open until the mid-90s, when multi-tasking computers had spread deeply into the sub-consciousness of collective societies. But *Tetsuo* is connected to cyberspace on a much more rudimentary level. The link towards cyberspace is its 'Man-Machine-Interaction'.

Speaking of music, references go in the direction of English Industrial- and the Electronic Body Music. In these musical movements, the body was put highly into question: The philosophical and political implications partly rendered expressions of atrocious art(s). With their emphasis on the transformation of the body via alternative settings of communication, Industrial Music can be rooted back to the Constructivist and Situationist movements and to the Viennese art circle of the Aktionisten. Bands like Clock DVA[5] function as a crossing point between the ages: For the album *Man-Amplified* (1992) the cover showed a collage by El Lissitzky and the band sang amongst others about the misuse of information by official institutions in cyberspace. *Man-Amplified* can be seen as a 'lost continent' in the treatment of *Tetsuo*. Both articulations have in common that they point out the transformation of man into a semi-organic creature. Might it be that their intensions differ, both absorb big influences from the Constructivist movement of how to treat technology and what to do with it for the use and misuse of distorted bodies.

2. But: What's a Cyborg?

> The word 'Cyborg' (cybernetic organism) devised by Dr. Manfred Clynes and Nathan Kline, define a Cyborg as 'An exogenously extended organizational complex, functioning as a homeostatic system.' […] Clynes points out an understanding of the nature of our thoughts in terms of their mathematical, electronic and time-space identities which will permit us to communicate better than we do at the present time, we may find new shapes and discover

> means of utilizing them to communicate in entirely new ways, ways that cannot presently be imagined.[6]

> A Cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction. Social reality is lived social relations, our most important political construction, a world-changing fiction […] we are cyborgs. The cyborg is our ontology; it gives us our politics. The cyborg is a condensed image of both imagination and material reality, the two joined centres structuring any possibilities of historical transformation. […] Cyborgs are couplings between organism and machine, each conceived as coded devices, in an intimacy and with a power that was not generated in the history of sexuality[7]

Some bodies look as if they would be in an organic metamorphosis (*The Fly*, *eXistenZ*, *Tetsuo*), some have put their bodies into a metallic exterior because of some handicaps, as seen in *Terminator*, *Blade Runner*, *Robocop* and *Star Wars* (Darth Vader). In between there are mix-forms ranging from the Manga *Akira* to the horror-slasher *Hellraiser*. Bodies into a metallic exterior are perfect incarnations of an effective state-apparatus as they represent the power of a certain system, whether to defend or to destroy other systems. On the contrary, the concept of metamorphosis represents individualistic attitudes and can be seen as seismographic observations of socio-political moods of the audience. In terms of aesthetics, the body in metamorphosis mostly has to undergo a quite violent and gory procedure: Usually infected by a virus, by strange coincidences or by mislead self-tests, the protagonists have to deal with their own mimicry. Neither are they familiar with the process of transformation, nor do they have the antidotes needed to cure or stop this act. Having undergone it, they are in a psychological state of having survived a rite of initiation. The initiation as a final result of the transformation is shown in nearly all Cyborg-films. In *Tetsuo* the two male protagonists become a role model for an altered, yet Cyborgian iconoclasm.

This topic can be interpreted in terms of a political and individual socialisation as well: Through this initiation, the Cyborg by definition is put outside of any legal system run by humans and – in a psychological sense – has put an 'irrational guilt' upon him. S/ he has become her/ his 'own boss', devoted only to personal rules of interaction. They are not bound anymore by canonized systems of values and ethics; they have become their own 'Metal Gods'. But being a Cyborg usually also means having incredible power and strength, to be 'exotic' and (through it) highly erotic. – This could maybe

serve as an argument why Cyborgs have gained so much recognition within the field of narratives.

3. The Man-Machine-Interaction: An Iconography of Waste

In *Tetsuo* the viewer is confronted with one of the densest Man-Machine-Interactions (MMI) ever seen in film-history. For better understanding, I want to point out that for the complex of the MMI in the context of *Tetsuo* it is important to bear in mind that we are dealing with exterior connotations, with a translocation of the body towards an exterior body which is concrete, analogue and figurative. Not the surroundings but the body itself becomes highly artificial. The organic body becomes metallic and illustrates the mimetic structures of changed states of reality. We are not dealing with abstract (like in the digital version of the MMI) but with concrete (= analogue) metaphors: The nervous system is substituted with wires, veins become tubes, blood transforms to oil, the whole body consists of all varieties of metal junk.[8] Here *Tetsuo*[9] signifies a break with the long tradition of the topic: Thinking of more or less highly artificial robots like the 'Machine-Maria', 'Robbie' from *Forbidden Planet* or even the three *Terminators*, the *Blade Runner* or *Robocop*, *Tetsuo* on the contrary generates its MMI via junk, via materials we are surrounded with every day. *Tetsuo* exemplifies the apotheosis of a new version of human existence not via a rationalized techno-dream (in terms of common understanding) but constitutes an iconography via an ensemble of wasted goods.

At this point, Cyberpunk comes in.[10] As in the original Punk movement in the 70s, old and useless materials were used in order to re-contextualise the signs of waste, to re-territorialize the body as a political field and to put up a sign against established values. The body-concepts in this film are crude, but that's why they combine all the 'negative' effects that machines in their sterile self-understanding should have had wiped out: tactile qualities, pain, death and the visibility of body fluids.

With its bizarre and rhizomatic structure the film is associated with other surrealistic representations. Concerning its MMI the film could take place in the 30s as well as in the 70s or the 00s, because the technological framework of the story and the narrative has been 'out-dated' since the very beginning. The grainy B/ W-images together with a highly poetic use of lightning enforce the suggestive feeling of a film from the 20s, intensified by a highly dramatized contrast-montage of stroboscope-like flicker effects.[11] Flesh and metal melt in a sexual act to become a biomechanical weapon.

In *Tetsuo* desire becomes an act of violent fetishism and self-mutilation. The film locates the MMI on a level of degeneration, where language has changed to some syllables without meaning. They more resemble the sounds of an animal or a machine than those of a human being. *Tetsuo* is an audiovisual feast of the transformation of a 'useful' member of

today's society – a Business Man – to an useless metal-monster, merged together with a metal-fetishist, ready to change the world into rust.

The term 'machine' should not be taken literally. It means a complex cluster of non-organically mediated spheres of existence, both on an individual and on a collective level. Of course I refer to the theories of the 'machine-phylum', postulated by Gilles Deleuze and Félix Guattari[12] as a main source. Here the machine is understood as an abstract – in the context of *Tetsuo* – yet organic metaphor for a technically generated body.

Tetsuo clearly can be identified as a symptom of a crisis in Japanese society. Looking at the past of Japan's horror-movies, the participation and defeat in World War II and the Atom bomb became paradigmatic topics. The subversive elements in *Tetsuo* become apparent if we keep in mind that Business Man as a paraphrase stands for the traditional way of life whereas Fetishist is the incarnation of the new way. Another path of interpretation is the paradoxical liberation of Business Man from a somehow 'robotic' everyday-life into a more 'human' condition through a Cyber (-punk) environment. In the end, they melt together but it is clear that before that Business Man has to undergo a change towards the ideals presented by Fetishist to become part of this new, modern type of society. We can estimate that the film is mostly viewed by an audience which is in their 20-somethings. This group is confronted with huge cultural changes, made visible in the conflict between the generations.

> This age group, which is seen a being mostly concerned with computer games and loud music, is described by the Japanese media as 'shinjinrui' which means 'new type of human being'. Although both of the main characters appear to be the same age, it could be suggested that Salaryman [=Business Man; H.D.] is representing the epitome of the former generation, whereas Fetishist is the shinjinrui.[13]

In the very end of the film, in its typical way of deviant sexual connotations, the hybrid of Business Man and Fetishist repeats the mantra pronounced by every new generation: 'Our love will destroy the whole fucking world!' And, finally, as they have become unbeatable metal monsters, they turn back to the blueprint of Mangas: 'We can rust the world into the dust of the universe!'

The subversive moments in *Tetsuo* are partly a result of its old-fashioned style but mainly of the use of everyday-junk to illustrate the transformation from a 'nobody' to a 'somebody'. You don't need half of the gross national product of a certain country, as in some Hollywood-films, to make this dream of mankind come true but it's enough to have some wires, tubes, cylinders, screws and chains. Here the complete devotion to metal by

the counter-protagonist leads to a fetishist allegory of the metal: This character, simply described as 'The Man' and 'Fetishist', is the mythical figure of one who has access to alternative wisdom, to secret knowledge. He is the one who knows about the pleasures and lusts of the transformation into a Cyborg. Fetishist is the Alter ego, the 'doppelganger' of the protagonist. We here deal with interdependencies, with two poles that configure each other: This process is fantastically made visible in *Tetsuo*: As a showdown, the two melt into one gigantic hybrid, one big colossus of steel, ready to take the world apart. At the same time, it is a principle of Zen to combine diversities into one entity. The face of Business Man becomes visible in this big ensemble of rotten metal, his transformation is complete. Having undergone the initiation and feeling his new power, Business Man says: 'Ah, I feel great!'. In these images the MMI has come to an end as man and machine have become identical. At the same time, this big hybrid indicates a 'false path', an error in evolution, a side-product which has been created by cheap industrial metal waste, by junk, not by high-class research. The hybrid can be seen as the incarnation of an unwanted by-product in a society trained for rationality and efficiency. The hybrid represents the 'New World'.

4. Sa, Koi!: Holes, Loops and Sex Exemplified

> That what has good shapes in the living nature has
> bad ones in its symbolic representation.
> Jacques Lacan, *Psychoanalysis & Cybernetics*, 1955.

'Sa, Koi!' means 'Come on!'. This phrase is quite often used in *Tetsuo*. It makes no sense for the story of the film, it is more an acoustic effect, a sub-textual narrative to spur on the tension of the spectator to become part of the transformation process.

The film *Tetsuo* by Shinya Tsukamoto[14] (born in Shibuya, Tokyo in 1960) is an artistic articulation between digital and analogue body-relations in time and space: The act of transformation equals a re-birth through technology with a high portion of creative violence around it.

> Tsukamoto sexually fetishises machinery – pistons, oil, the gleam of chromium, jagged edges, tangled wires – and equates it with wildly repressed desires – it is constantly trying to burst from inside human skin, run rampant and absorb everything into its mass. Indeed what more potent an image can such a regimented society as Japan have produced than that of a white collar worker engaged in a ballet of wills to stop his flesh being taken over by machinery that insists on erupting from within.[15]

The organically based orgasms become semi-organic, they mutate to ill-directed eruption of raw articulations between each entity. There is no 'sense' whatsoever in reproduction; it merely has changed to procreation of a feverish dream of pure lust. This lust is released by the new capacities of the Cyborgs and would not be imaginable in the context of a framework of traditional values.

Tetsuo wants the viewer to comprehend the erotic qualities of prosthesis, of non-organic extensions of the body in an environment of Industrial Ecstasy. The soundtrack by Chu Ishikawa, with its hammer-like, tribal metallic rhythms, contrasted with highly dramatized electronic sound effects and its small melodic loop-repetitions, aims to create a piece that could be called 'metal symphony'. Looking at the actors in *Tetsuo* it becomes apparent that they combine the mechanical way of performing from the European theatre-tradition of Constructivism (V.E. Meyerhold, the FEKS etc.) with the static movements of Chinese ghost films and the traditional Japanese Kabuki theatre. Another important direction leads towards the Japanese New Wave-cinema/ -theatre of the 60s with protagonists like Shuhji Terayama and Nagisha Oshima.[16]

Tetsuo is an obsessive film about holes and openings: The orifices of the organic bodies become one with the non-organic ones. They do not substitute each other but one system is exchanged with the other. We find different forms of deviant sexuality: The snake-dance, in which Girlfriend wears a long dildo that has come to life and that penetrates the formerly completely average white collar Business Man from behind; the metal-fetish of Fetishist, when he inserts bare metal parts into his flesh; when, during his act of transformation, Business Man's genitals change into a big driller with which he hunts Girlfriend ('Do you want to taste my sewage pipe!?'), and later when in an act of auto-destructive love she kills herself by riding the driller;[17] and when Business Man and Fetishist become one entity with the help of 'homoerotic' metal-junk. The car-crash has linked these two characters so closely together that we can assume that in this non-existing future procreation through coitus will be replaced by semi-organic sexual practices like car crashes.[18]

Psychoanalysis knows a great deal about the problematic relation between genders towards the orifices of the body: In case of *Tetsuo* we have a nightmarish version of a phallus that becomes a noisy driller and of a vagina dentata that is made out of pulsating metal and buries two males within her. The significance of sexual images is prolonged into a merely abstract i.e. surrealistic stage, a strategy quite well known from Manga-/ Animé-Films. But here the images do not deliver a cartoon-like liberation but enforces the dark and brutal vision of a time and its sexuality that has lost control over them. Even the intercourses of the couple are shown in a gone wild, lust-driven way. Here, 'Sa, Koi!' starts to become a metaphysical

meaning as it signifies the demand for changes in a sexual and sociologic framework: Come on, overcome your old rules to make place for the new.

Tetsuo does not play with a certain sexually connotated iconography: the signs are quite crude, desire is transferred to a wild, more animal-like behaviour for achieving pleasure. This desire does not necessarily mean sexual or destructive pleasure. It is a part of the strong need to get into contact with each other – more or less in any way possible, whereas the way the protagonists meet is all but 'regular', so maybe it is another indicator for a social system which has become unbalanced.

Notes

[1] A vast collection of research is provided via: http://www.press.umich.edu/jep/works/vbush/vbush0.shtml. 24 March 2003 (31 July 2003). Here the highly influential text *As We May Think* by Vannevar Bush from 1945 can be found, too.

[2] The topic of Frankenstein has fascinated generations of filmmakers: From of the very first in 1910 by J Searle Dawley to *Frankenstein Meets the Space Monster* to Kenneth Branagh's *Frankenstein* in 1994. According to the International Movie Database, so far more than 80 films have been made.

[3] A certain amount of spirituality – or at least metaphysics – seems to be a constant through the ages. It looks as if there has to be interdependency between highly developed science and its opposition, at least in culturally advanced societies. What is the alchemist in *Metropolis*, is the figure of the Fetishist in *Tetsuo*. These characters have a certain atavistic knowledge unknown to regular human beings as they already have undergone a process, which in this context is an initiation in its most tribal sense. Religion has changed its parameters with technology.

[4] Some good sources are: CE Price, *Monsters, Horror Movies and the Atomic Bomb*, 2002, Accessed on 1 July 2003. http://vt.essortment.com/monstershorror_rxze.htm. and JF Shapiro, *A-Bomb Cinema*, Routhledge, London & New York, 2002).

[5] A Newton, 'Man-Amplifier', *Man-Amplified*, 23 July 1998, (1 July 2003), http://www.clockdva.com/man.amplified.html. Coincidence tells that both *Man-Amplified* and the sequel of *Tetsuo*, *Tetsuo II: Body Hammer*, were released in 1992.

[6] Lines notes by A Newton of the track *Man-Amplified* from the same-titled album. Conte Disc 182, ©1992 Anterior Research.

[7] DJ Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist Feminism in the Late Twentieth Century' *Simians, Cyborgs, and Women: The Reinvention of Nature*, Free Association Books, London, 1991, pp. 149-

150. See also: J Butler, *Antigone's Claim: Kinship between Life & Death*, Columbia University Press, New York, 2000.

[8] Some of the transformation-scenes are high-class animation cinema. Apparently some of these images trace back to the Czech master of animation Jan Svankmajer.

[9] *Tetsuo* is not a typical cyber film, it is more 'proto'-cyber. Films like *The Lawnmower-Man* (1992), *Brain Slasher* (1990) or *Ghost In A Shell* (1996) are closer to present understandings of these subjects. As it was said before, the film manifests itself between important changes in which Cyberculture and VR become part of everyday culture. It also could be argued that *Tetsuo* is more of an updated 'Industrial'-film. The film was released during in a period when society shifted from the analogue, the 'mechanical age' (Allucquère Rosanne Stone) to the digital era. As is suggested further on, the aesthetics of the film are clearly regressive. *Tetsuo* is, in a classical sense, a 'Constructivist' film and not a 'Neo-something'. The film contains a certain innocence towards technological developments in favour of interpersonal actions and settings.

[10] For further research see: http://project.cyberpunk.ru/, 21 July 2003, 31 July 2003.

[11] On the contrary, *Tetsuo* was at a peak-level concerning its techniques of cuts and montage. There are some scenes in which Fetishist and Business Man hunt each other down. These sequences are done in a very innovative way of montage that give the impression that the protagonists are standing still while the landscape is running instead of them. This effect is achieved with a cunning stop-motion animation, a technique usually used in animation-films. In one of the sequences that could be dated back to the classical period of Expressionism/Constructivism, Girlfriend performs a strange snake dance. Here the viewer is confronted with the striking poses of a female dancer who apparently has gone insane and with a very dense foreplay for a violent sexual penetration. This sequence quite remarkably could be the result of the updated nightmare of the dance-scene dreamt by Freder in *Metropolis*.

[12] G Deleuze & F Guattari, 'Programmatische Bilanz für Wunschmaschinen,'. in Gilles Deleuze and Félix Guattari, *Anti-Ödipus. Kapitalismus und Schizophrenie* (Frankfurt, M.: Suhrkamp), 497 – 502.

[13] C Monk, *Ninja Spice's Tetsuo Site*, 2, 18 June 2003, (23 July 2003),http://www.geocities.com/Tokyo/Shrine/8509/tsukamoto/tetsuo2. html.

[14] A good biography of Shinya Tsukamoto is provided by M Shilling, *Contemporary Japanese Film*, San Francisco: Chronicle, 1999 and the URL-collection http://web.tiscali.it/no-redirect-japop90/Registi/tsukamoto.html. See also M Stiglegger, 'Körper der Crisis. Das Cinema pur von Shinya

Tsukamoto,' in *Ikonenmagazin. Magazin für Kunst, Kultur und Lebensart* (30 June 2003). http://www.ikonenmagazin.de/artikel/Tsukamoto.htm.

[15] R Scheib, *Tetsuo – The Iron Man*, 1994, 1997, 1998, 1999, (23 July 2003) http://www.roogulator.esmartweb.com/sf/tetsuo.htm.

[16] *Tetsuo* found its closest feedback in terms of today's cinema in *Electric Dragon 80.000V*, a film which was released in 2000 and was directed by Tsukamoto's former teacher Sogo Ishii.

[17] It is important to note that the women in the film can be seen as very emancipated. She moves in some scenes not only in a highly sensual, but even sexual manner, independent from the male protagonist. She is turned on yet also frightened by her boyfriend's metamorphosis. At the same time, she kicks Business Man into a wall and wounds him with a knife when he in his Cyborgian aggressiveness wants to rape her. The act of killing herself through a sexual act with her boyfriend indicates her liberation from all established systems in favour for her own system. Compared to her boyfriend she can be described as a rather active person. Did she kill herself for love's or for lust's sake and what are the consequences for a patriarchal system? Woman in Glasses, like the duo Business Man – Fetishist, represents the dark side of Girlfriend. This stylish Cyberpunk is the perfect incarnation of a (male) wet dream of how a tribal Techno-Chic could look whereas before she was a perfectly ordinary 'no-one' in the big halls of the underground of Tokyo. Through her transformation she becomes a character most closely related to Animé-films.

[18] Here we might of course think of JG Ballard and his novel *Crash* (1973). The film (1996) was directed by D Cronenberg, the 'master of new flesh'. This is how circles of shared interests and visions produce feedback.

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Cyborg Iconography: Constructing the Image of the Cyborg

Carlos Arenas

Abstract
The figure of the cyborg, one of the main themes of postmodern science fiction, has been well studied in the films industry field as a result of the impact of movies such as *Terminator* (James Cameron, 1984) and *Robocop* which went deeply into public and critics.[1] A body assaulted and changed by the effect of science and technology has been altered through prosthetics and implants like never before. In that sense, radical innovations in medicine, in the field of transplants and prostheses have achieved that thousands of people depend on electronic gadgets in order to survive.[2] But the coexistence with machines goes further. As Bruce Sterling comments 'The technology of the eighties sticks to the skin, responds to touch: personal computers, Sony Walkman, mobile telephones or contact lenses'.[3] Indeed, technology is very near to us, even under our skin, redefining human nature. A cyborg is by definition a cybernetic organism. To be precise, it shows a human who has certain physiological processes aided or controlled by mechanical or electronic devices.[4] It refers in effect to a self-regulating human-machine system in which the machine parts become replacements, which are integrated or act as supplements to the organism to enhance the body's power potential.[5] It basically portrays human fusion with technology. The term *cyborg* is usually mixed frequently with others such as robot or android due to the free use of the concept, especially in films.[6] Robots, androids, and automatons have obviously influenced the creation of the cyborg, but in the original sense it is a hybrid of flesh and metal, at least a part of which must be organic.

Key Words: Cyberpunk, cyberculture, technobody, technoscience, body artists, androids.

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1. First Graphic Representations

The figure of the cyborg has been in circulation since the sixties, as a product of the fascination with the human being overcoming with the help of technology, and because of technophobia, an aversion to machines. This ambiguity constitutes the impulse for developing the main graphic and visual representations of the subject.

It is quite possibly that the first published depiction of the subject would be that created by Fred Freeman and published in the July 1960 issue of the North American magazine *Life* illustrating an article entitled *Man*

remade to live in space. The image shows a hybrid of human and robot, in which connections are made between several objects such as in the circulatory system.[7] But the media with most examples of cyborgs during this decade was American science fiction comic book

Comic super-heroes were born in the Cold War era and the nuclear fear, as a product of secret experiments in military laboratories. During the sixties there was a revival of the comic book, thanks to Marvel, humanising the figure of the superhero and creating a new generation of tortured characters with ambivalent feelings about their superpowers. Among these characters many cyborgs are found. This decade opened in the United States with J.F. Kennedy, an optimistic period, suitable for the creation of super-heroes who fight against cruel villains. These characters emerged in science fiction comic books, where mutations, transformations and superpowers are the order of the day. Some patriotic colouring flooded the comic books of the time in addition to the incipient relation between science and technology. It is at this time that the first man-machine at the service of the good and its opponents appeared. Most of these cyborg characters were developed in the Marvel Comics publishers by the hand of some of the most important authors of the comic book, namely Stan Lee, Jack Kirby and Steve Ditko, who innovated both the dynamics of his graphics and the humanity of his characters. Included in the long list of Marvel super-heroes, three of the most significant cyborg characters are Iron Man, Doctor Octopus and Wolverine.

Iron man is actually a billionaire scientist, whose name is Tony Stark. He is a weapons inventor and is taken prisoner in Vietnam and condemned to make weapons for the communists. He had been wounded by a piece of shrapnel in his chest, and decides to make a bid for escape and builds himself a transistorised armour which he uses both as a pacemaker and to free himself. Besides the steel armour is a high-tech armour, equipped with all kinds of weapons, which he will employ against every villain he encounters. He cannot live without the armour as it protects his damaged heart, and therefore is life-sustaining. Afterwards he implants himself a microchip. Iron man was very popular through these stormy years of the Vietnam conflict and became one of the first images of the cyborg (dating from 1963) His grey appearance has evolved to his more classical look of gold and red armour.

Dr. Octopus (debut in 1963) was an atomic researcher, who developed a harness to control four titanium tentacles, in order to manipulate radioactive substances. But during an accident he was exposed to radioactive organic liquids, that grafted the mechanical tentacles to his skin and damaged his brain, turning him into an evil character, and the mortal enemy of Spiderman.

Since 1974 Wolverine has been a member of the X-men super-heroes group (designed by John Romita, one of the most important artistic

directors from Marvel). Named Logan, his remarkable feature is razor-sharp claws embedded in his forearms. They are retractable surgical implants made of an indestructible metal called adamantium. Inside Wolverine his skeleton has been bonded with adamantium too. One of his remarkable powers is an accelerated healing factor that allows him to survive wounds. Cyber, a Wolverine enemy, has his body covered with armour of adamantium, like a second skin.

The subject of implanted body armours has become a recurrent theme in super-hero comic books, especially since Marvel. The deadly enemy of the Fantastic Four, Doctor Doom, is another character with a metallic appearance (since 1963). Because of a failed experiment, his skin corrodes, therefore he decides to build himself a metallic armour, which undersells his skin permanently, shaping his cold appearance. He also wears a green cape reminiscent of medieval knights.

Another famous cyborg from Marvel is Deathlok (since 1974). He is a man called Luther Manning who becomes a computerised machine for the government, an assassin with superhuman capacities besides enhanced strength. He suffers a synthetic and cybernetic augmentation of his body. A remarkable feature is that a mini computer occupies a portion of his skull.

Cyborg super-heroes are not exclusive by Marvel. Another important publisher, DC Comics, has a hero called precisely Cyborg (since 1980). This is Victor Stone; a scientist who becomes a cyborg when his father, also a scientist, opened a dimensional portal in the lab from a protoplasmatic creature emerged and damages Victor's body and half his face. His father who had been working on a robotic suit for the government decides to use it to save his son's life, therefore becoming a super-hero.

Cyborg is very present in the new generation of superheroes such as Cable, member of the New Mutants (linked with the X-Men). He has a body of liquid metal and organic steel in his left side, due to an infection from a techno-organic virus that he can control with his telephatic abilities.

Besides the American comic book, we must not forget the French science fiction illustrators, a group of artists who have published their works since the end of the seventies in the underground magazine *Heavy Metal*, and who have played a crucial role in postmodern science fiction. Amongst whom we should underline Moebius, Enki Bilal and Phillipe Druillet. They have created a school to which must we add the Argentinian Juan Giménez and the Italian Oscar Chichoni who develop a great aesthetic interest in machines and technology in their work.

Cyborg subjects filled stories in comic books and cartoons, such as Inspector Gadget, a French policeman, rebuilt as the new prototypic police enforcement cyborg half man, half machine with a body housing hundreds of tools and devices for crime detection. Nor must we forget the vast influence of manga and Japanese animation film, anime, fascinated with the impact of

technology in society. Two essential movies are *Akira* (1988, Katsuhiro Otomo) and *Ghost in the shell* (1995, Mamoru Oshii), cult movies for fans of cyberpunk. Robotocisation of Japanese society, the theme of bodies replaced by machines, and access to the net appear constantly in these films.

2. H.R. Giger and Biomechanics

One of the most interesting creators from the past decades in the world of art is the Swiss artist H.R. Giger. Giger is a pioneer in the imagery of the cyborg, and in the visual representation of the technological body from a conceptual and artistic point of view. Surprisingly his work has gone unnoticed in academic circles and for art historians; instead he has been omnipresent in the cyberculture of the eighties and nineties, becoming in one of the most imitated and influential contemporary artists. According to one film critic,[8] Giger changed the look of contemporary science fiction movies. Another critic and artist too, Vincent di Fate, thinks that both Giger and Syd Mead (the conceptual artist of Blade Runner) mapped out the entire look of the modern science fiction film.[9]

The fact is that after his contribution to the movie *Alien* (1979, Ridley Scott) science fiction has never been the same again, since with the creation of the protagonist monster, synthesis of reptile, insect and machine, he introduced an innovative concept into the postmodern panorama, biomechanics. With his airbrush paintings, his film collaborations and his graphic works he has developed a personal style, called biomechanics by Giger himself, in which he represents the synthesis of the biological and the technological, on an iconographic level by the union of the organic with the inorganic, a combination of flesh and metal.

His archetypical creations, biomechanoids, are widespread throughout his work, representing metaphors of man in a technified milieu. They show mechanic parts as tubes, steel sheets, engines, implants and transformations from penis and skulls into metallic objects. His work represents in some way the 'fin de siècle' spirit. Stanislav Grof, comments on the term biomechanoid:

> It would be difficult to find a better word describing the Zeitgeist of the twentieth century, characterized by staggering technological progress that has enslaved modern humanity in an internecine symbiosis with the world of machines. In the course of the twentieth century, modern technological inventions became extensions of our muscles, our nervous system, our eyes and ears, and even our reproductive organs, to such an extent that the boundaries between biology and mechanical contraptions have all but disappeared.[10]

The hybridisation of the body with mechanics is obvious in his works, in which the transition is subtle and smooth, producing a powerful cyborg imagery, which confounds the organic and the inorganic. This feature is what makes Giger's work so interesting, because a central theme of cyberculture is the confusion between the boundaries of man and electronic technology. Along his artistic career Giger shapes a new body anatomy, a sinister architecture of the body, by juxtaposing object, metamorphosed forms and a symbiosis of the biological and the mechanical.

Since the sixties, he has worked with the subject matter of the body and his vision of monstrosity, using metamorphosis and metaphors in order to reach a certain ideal of beauty. First of all through drawings and sculpture and still into the seventies with the airbrush painting with which he develops and improves his hyperrealistic style. Giger has achieved a synthesis in his art that is a symbiosis of different concepts and artistic traditions, giving visual expression with a great mythological power and enigmatic symbolic values.

In his technological landscapes the concept of biomechanics is also present, it pervades his whole work as in the series *New York City* (1980). One of the paintings of the series, *Torso*, depicts a wired body interconnected with circuitry, again exploring the relation of medicine and science fiction.

His visionary art, combined a surrealistic way with social satire, uses black humour in its creations, as seen in the *Atomic Children* (1961-1963), who a product of the radiation and body alterations that can provoke atomic power. In the sixties he developed an alien imagery with mutant beings, wired and transformed into new flesh, from his monstrous concept.

One of the main points of Giger's painting is the display of a powerful iconographic machinery where he mixed the gothic, the satanic and demonic and underground in order to create new body aesthetics, a new anatomy linked with the figure of the monster (the clearest example is the *Alien* monster). *Alien* is represented as bodily metaphor in the universe created by Giger, a sinister world product of the present nightmares as war, death, cloning, all of them in relation to technology (man exposed to the abyss of risks and possibilities opened by genetic engineering). In the work of Giger the predominance of technologies and machines emerges, dealing with the human adaptation to this situation and his pessimistic attitude about the symbiosis of people and machines. Military and industrial symbols appear constantly in his paintings: pistols, machine guns objects, bombs, wires, metallic plates, circuitry, trains and lots of mixed elements. He also combines futuristic and archetypal fears and apprehensions, bringing up to date symbolic figures like the one of the devil, the goddess and the magician.

Besides cyborg, Giger deals with other subjects as interesting as disease, in his series of *Babylandscapes* (1973), technological maternity in his illustrations and designs for *Alien*, the magical and the esoterical in his

triptych series like *The Spell* (1973-1977), or a recurrent theme in most of his creations, birth, death and sex. His attractive art offers diverse readings and interpretations, ranging from the artistic to the psychological.

As several artists identified with Giger's work, his influence on plastic art and audio-visuals of cyberculture is huge: lots of designs of fantastic movie monsters are clearly inspired by *Alien*; underground art is seduced too (tattoo artists and techno rock music bands); fantastic postmodern art (illustration, painting and digital artists); dark aesthetics, and he has even received a homage of cyberpunk literature, in William Gibson's *Virtual Light*.

3. Post-Modern and Avant-Garde Art

As well as Giger, other artists have worked with cyborg subject matters from different artistic disciplines, becoming a characteristic genre of the late century postmodern culture. Apart from the comic book, the main fields for creation have been fantastic illustration and body art

Some illustrators who worked in the realms of science fiction, like Kevin Murphy, represent sinister portrayals of cyborgs. But as a contrast, we also find images of female cyborgs as desirable objects. The Japanese illustrator Hajime Sorayama, develops the eroticised cyborg, combining robot technofantasies and futuristic visions through an intense hyper illustrated style. His series of *gynoids* (female androids) show his cyborg vision, a eroticised woman with mechanical attributes.[11]

One of the greatest exponents of cybernetic body art, is the Australian Stelarc, one of the artists who uses his body as a 'design object' and has already asserted that the 'body is obsolete'. As Mark Dery points out 'Stelarc embodies in advance the hybrid man-machine that we are all becoming in a metaphorical sense'.[12] With his body amplified through laser beams, robotic arms, microphones, cybergloves and cables he started investigations about our present evolution. Other radical artists created intangible sculptures in performances during the sixties and seventies, captured on video and in photography, who redefine their bodies by creating new images. Along the same lines as Stelarc, the Spaniard Marcel.lí Antúnez establishes a multidisciplinary and intertextual performance (founder of the theatre group La Fura dels Baus). In his work *Epizoo*, he connects with the audience through a computer, used by the audience to control his movements on an exoskeleton, worn by Antúnez himself, with movement of the ears, nose and pectorals. Stelarc and Antúnez's exoskeletons highlight the postmodern artist's fascination with medicine and technology.[13]

As opposed to these technological visions of enlarged mechanical giants, we come across a poetic cyborg such as that developed by the Spanish female artist Marina Nuñez. During the nineties she has done several series of cyborgs, which promise the emancipation faced Adam's body created by

God. Inspired in the dreams of cyberculture that defy the classical idea of corporality with the creation of an utopian body altered by prostheses and genetic engineering, she has done paintings depicting cybernetic creatures that reflects her visions. In the preface of her latest catalogue, she writes:

> Some bodies are defined in the negative: […] like the hybrid bodies of cyborgs, impure because of their heterogeneity, illegitimate by being constructions without a certificate of origin nor guarantee of originality, unsteady due to prosthesis and connections mapping out their boundaries, inhuman because they attack the old essences and nature.[14]

Marina Nuñez visualises monsters, feminine figures, fluorescent beings, wiring cyborgs that betrays her interest in the anomalous and imperfect body. Digital computerised bodies, biotechnological prostheses, wires and cables conform an alternative and trangressive image of the cyborg.

4. The Golden Age of Cyborgs: Cyborg Cinema

Science fiction films of the eighties and nineties are one of the media that have generated more proposals and images of cyborgs to definitely popularise the genre. Within fantastic and action film genres, characters have benefited from spectacular productions and sophistication of special effects and makeup departments. This is where avant-garde artists apply their work and develop their creations to the limit, in order to make them believable, combining conceptual designs, models, makeup and computer technology, achieving very realistic characters. Cyborg has generated one of the dominant subject matters in postmodern fantastic cinema, developing science fiction stories that take place in apocalyptic futures or in surrealistic scenarios.

According to Telotte, the fundamental interest of the science fiction genre since the beginning of the eighties has focussed on the impact of intelligent machines and robotic automation. In that period the figure of the robot/cyborg/replicant assumes the central role of North American movies that will explore technophilia and technophobia. Since *Blade Runner* (1982, Ridley Scott), the key of the modern science fiction film, a growing fascination with a human synthesis industry, can be seen involving organ replacement and implant prostheses. These characters will predominate the postmodern science fiction cinema. There is a kind of seduction for these beings, at the same time as fear and phobia. As Telotte points out in another essay, these kind of creations (robot, cyborg, android) are images which meticulously dissect the empty modern ego, which highlight the degree to

which we all seem to have been mechanised, transformed into programmed bodies, into bodies with indifferent spirit.[15] These images maybe a reponse to the need for a better understanding of ourselves, perceiving our humanity and reconstructing our idea of ourselves. The cyborg genre will try to examine our ambivalent answer to technology and anxieties in a more and more technified environment.

Cyborg cinema was forged in the seventies in films such *The Terminal Man* (1974, Mike Hodges) *Demon Seed* (1977, Donald Cammell), or the film that opened android movies, *Westworld* (1973, Michael Crichton), that presents a very humanised robot, as opposed to the films of the 50s and 60s, where robots had an obvious mechanical appearance.[16] But the media that best showed cyborgs in this decade was television in two TV series: *The Six Million Dollar Man* (1973-75), inspired by the novel of Martin Caidin *Cyborg* and late on *Bionic Woman* (1976-1978). Both series represent a positive image of the cyborg, whereby technology is able to improve the faculties of the human being. Steve Austin is a superhero who can resolve complicated situations. He was a pilot but suffered a serious accident that forced doctors to rebuild him with bionic parts and equip him with mechanical devices (a camera in one eye, an oxygen bottle for diving or a radio-transmitter). But very soon we will see the opposite image, the one who shows the fear and suspicion that machines produce, that will create dark and evil characters.

5. Conclusion

The images commented on above represent examples of the large number of reflections about the influence of technology on the post-modern era and specifically the transformations that the human body undergoes. The fictional cyborg is very useful as a metaphor for certain aspects of human behaviour and the human condition. The cyborg figure tries to shape, to anthropomorphise something as abstract and difficult to understand as electronic technology. Actions that enhance, replace, modify, penetrate, graft, alter on the whole, are frequent when speaking about this concept. Implants, prostheses, grafts and the penetration of industrial objects into the flesh have shaped the image of a new being, who develops parallel to evolutionary processes but still has obvious connections to real life, where medicine, surgery and scientific investigation offer references for the introduction of the cyborg into our society.[19] Art and cinema will be the two artistic fields that conduct the most research into the construction of this being, the emblematic figure of cyberculture.

Nowadays we coexist with the cyborg, it is present in daily life and floods the panorama of the audiovisual arts, appearing in television and magazines.[20] While writing this text I ran into a Sunday newspaper with this headline: *Revolution in the operating room: 40 days before, Adelina had*

Parkinsons and today she can sew.[21] The text explained the complexity of this kind of operation in which – thanks to technology – a disabled person can recover and start doing the housework. With cranial trephination, electrodes, esterotaxic scaffolding and advanced software the miracle has been made possible. The result was an electrode implanted in the brain, wired to a neurostimulater implanted in thorax that activates vital functions impossible to execute for a person with Parkinsons disease.

The scientist Ray Kurzweil thinks that due to the unstoppable acceleration of technological development, we are all going to become robots very soon or end up merging with them. The union between humans and machines is very developed and lots of devices already exists to replace our natural organs such as knees, shoulders, teeth, skin, arteries, arms, fingers and so on.[22]

Science fiction and art prepare us for the coming future, they have – in advance – created shocking images for us to reflect and think about cyborgs.

Notes

[1] See A Kuhn (ed), *Alien Zone*, Verso, London, 1990.
[2] The sixties marked the impulse of these medical advances since the first pacemaker was implanted (1958) and with the first artificial heart implant (1969).
[3] B Sterling (ed), *Mirrorshades: Una Antología Cyberpunk*, Siruela, Madrid, 1998, P. 22.
[4] 'Cyborg' in *The American Heritage Dictionary of the English Language*
[5] http://www.bartleby.com/61/37/C0833700.html. (7 June 2003).
[6] M Featherstone & R Burrows, 'Cultures of Technological Embodiments: An Introduction,' C*yberspace/Cyberbodies/Cyberpunk*, Sage, London, 1995, p. 2.
[7] One of the more famous cyborgs, Terminator, is actually a robot with human appearance, an android, a machine, but is constantly referred to as a cyborg both in the film and by critics.
[8] In the same year, two NASA scientists named Manfred Clynes and Nathan Kline, coined the term cyborg to suggest some of the advantages for space travel, of altering the human body with machines.
[9] *Cinefantastique*, 15,4, 1988.
[10] V Di Fate, *Infinite Worlds: The Fantastic Visions of Science Fiction Art*, The Wonderland Press, New York, 1997, p. 95.
[11] S Grof, *Icons*, Taschen, Köln, 2002, pp. 13-14.
[12] Term created by the female British writer Gwyneth Jones.
[13] M Dery, *Velocidad de escape*, Siruela, Madrid, 1998, p. 166.

[14] Medieval armours were the inspiration for exoskeletons, orthopaedic supporting apparatus, illustrated in the work of the Italian anatomist and embryologist of the sixteenth-century Hieronymus Fabricius *Opera Chirurgica*. So that work shows the notion that man is made up of replaceable parts. For more information about medical advances see M O'Mahony, *Cyborg the Man-Machine*, Thames and Hudson, New York, 2002. These artists' exoskeletons are inspired by those created in aeronautical research. See also Chris Hables Gray, ed., *The Cyborg Handbook* (New York, Routledge, 1995), 91 (exoskeleton built by Cornell A. L.).
[15] M Nuñez, *Centro de Arte de Salamanca, 2002*, Consorcio Salamanca, Salamanca, 2002.
[16] JP Telotte, *Replications: A Robotic History of the Science Fiction Film*, University of Illinois Press, Urbana, 1995, p. 165.
[17] Pseudonym used by C Cunningham, one of the greatest innovators in videoclip art. He had an interesting career collaborating in special effects from fantastic movies as *Hellraiser 2* (1988), *Alien 3* (1992) and *Alien Resurrection* (1997). He is an artist specialised in robotic and cybernetic creations, in fact, one of his latest request is to create the characters for film adaptation of W Gibson's *Neuromancer*.
[18] Recent experimentation seems to come from science fiction stories: American researcher William Dobelle has invented an artificial eye, connected to the brain, which offers limited sight to the blind. Kevin Warwick, professor of Cybernetics at Reading University in England has a chip implanted in his arm. Professor Steve Mann at Toronto University invented the WearCam, which he uses as an interface between the world and his brain.
[19] In 1998 the British magazine *Dazed and Confused*, showed physically disabled models like A Mullins, double amputee. Fashion designer A McQueen and photographer N Knight were responsible for the issue.
[20] JL de la Serna, 'Revolución en el quirófano,' *El Mundo*, 22 June 2003.
[21] R Kurzweil, *We are becoming cyborgs*, 15 March 2002, 11 June 2003.
[22] http://www.kurzweilai.net/meme/frame.html?m=10 .

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