

Study on Social Computing and Immigrants and Ethnic Minorities: Usage Trends and Implications

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PREFACE

Launched in 2005 following the revised Lisbon Agenda, the policy framework ‘i2010: A European Information Society for Growth and Employment’ has clearly established digital inclusion as an EU strategic policy goal. Everybody living in Europe, especially disadvantaged people, should have the opportunity to use information and communication technologies (ICT) if they so wish and/or to benefit from ICT use by services providers, intermediaries and other agents addressing their needs. Building on this, the 2006 Riga Declaration on eInclusion¹ defined eInclusion as meaning “both inclusive ICT and the use of ICT to achieve wider inclusion objectives” and identified, as one of its six priorities, the promotion of cultural diversity in Europe by “improving the possibilities for economic and social participation and integration, creativity and entrepreneurship of immigrants and minorities by stimulating their participation in the information society.”

In the light of these goals, and given the dearth of empirical evidence on this topic, DG Information Society and Media, Unit H3 (eInclusion) asked the Institute for Prospective Technological Studies (IPTS)² to investigate from different angles the adoption and use of ICT by immigrants and ethnic minorities (henceforth IEM) in Europe and the related policy implications. In response to this request, IPTS carried out the study “The potential of ICT for the promotion of cultural diversity in the EU: the case of economic and social participation and integration of immigrants and ethnic minorities”, the results of which are available in several reports at the URL:³ <http://is.jrc.ec.europa.eu/pages/EAP/eInclusion.html>

As part of this research effort, IPTS issued a tender in late 2007 for a study to explore the usage trends of social computing by IEM and their implications. By 'social computing' we refer here to the online applications and services based on Web 2.0 solutions, such as blogs, social networking sites (Facebook, MySpace etc.), wiki-based initiatives for collaborative content production and sharing and others.⁴ The aim was to carry out a first exploration of this new research field, using innovative methods and tools.

This document is the final report of this exploratory research carried out in the first half of 2008 by the 'ICT and migration' research team at Fondation de la Maison des Sciences de l'Homme in Paris. Information about follow up and new research carried out along similar lines (e-Diasporas Atlas project) can be found at the following links:

<http://www.msh-paris.fr/recherche/thematiques/tic-migrations/>
<http://ticmigrations.fr/documents/ediaspora-atlas.pdf>

¹ Available at http://ec.europa.eu/information_society/events/ict_riga_2006/doc/declaration_riga.pdf

² IPTS is one of the seven research institutes of the European Commission's Joint Research Centre

³ At this URL one can also find this and other IPTS reports produced from the research work on ICT and immigrants and ethnic minorities, which at the time of writing concerned also the use of ICT in domiciliary socio-health care delivery and the role of migrant care workers.

⁴ See on this Pascu C. et al. (2007), “The potential disruptive impact of Internet 2-based technologies”, First Monday, volume 12, number 3. At http://firstmonday.org/issues/issue12_3/pascu/index.html

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Executive Summary

This report is one of the outcomes of the research programme on the use of Information and Communication Technologies (ICT) by immigrants and ethnic minorities, carried out by the Institute for Prospective Technological Studies on the request of DG Information Society and Media, Unit H3 (ICT for inclusion) of the European Commission.

This study aimed to explore the usages of Web 2.0 applications (social computing) among immigrants and ethnic minorities in order to understand their potential benefits and risks for the integration and participation of these groups in European society. The study also aimed to test some innovative tools for data gathering, representation and analysis of these usages which are developing across the online and offline worlds.

The introductory chapter on the state of the art of social computing reveals that although social computing has already been the object of many studies, its relation to immigrants and ethnic minorities has not yet been investigated, except in the United States with regards to African-Americans. In Europe, research on ICT use by migrants has not yet addressed the issue of social computing as such. Nevertheless, research on how racial and cultural differences are reflected on the Web seems to provide useful hints for understanding immigrants and ethnic minorities' Web 2.0 practices.

Research hypothesis

The main hypothesis underlying this study is that the shift from Web 1.0 (exemplified by Web portals, forums etc.) to Web 2.0 services (specifically blogs and online social networks) leads to mutations in migrant communities' collective organisation and forms of living together, especially with regards to integration strategies and the assertion of a common (national, ethnic) identity. Practices with Web 1.0 technologies are particularly suited to a diasporic lifestyle, which is characterised by highly organised communities that share political, religious, and cultural references. These practices favour the expression of a common identity with multiple links, real or imaginary, to the home country. On the other hand, Web 2.0, by empowering the individual, seems to challenge such collective organisation in favour of diverse forms of expression and self-disclosure, potentially multiplying the types of associations and relationships.

Migrant groups selected, case studies and research tools

The above hypothesis was tested on a set of cases concerning Romanian and Moroccan migrant communities in Europe (mostly in France). For the Romanians, the shift from Web 1.0 to Web 2.0 is set in the new, rapidly evolving context of Romania's entry into the European Union in 2007. For the Moroccans, who form one of the largest migrant communities in the EU, this shift occurs in a migration context characterised by the strong presence of the state in their country of origin and, more generally, of hierarchical organisations. The case studies used are listed below:

- *Migrants' Web 1.0*: this case explores the forms of collective organisation, and topics of interaction on two well known websites for migrants (*Yabiladi* for Moroccans and *TheBans* for Romanians) and also the integration strategies they favour.
- The use of Web 2.0 technologies in a still largely Web 1.0 approach is discussed by comparing the distribution and use of respective functionalities in French-speaking Afro-Caribbean websites.

- *Migrants in the Moroccan blogosphere*: this case explores the role played by migrants in the development of the Moroccan blogosphere (called *Blogoma*), which comprises 20-30,000 bloggers. It also seeks to compare the community emerging from blogging practices with those growing up inside Web 1.0 portals and forums.
- *Moroccan migrant musicians on MySpace social networking site*: this case explores how, and to what extent, publishing their work on an online social network can help migrant musicians (and artists in general) to gain recognition, find audiences and increase their business opportunities.
- *Second generation immigrants on the Skyblog social networking platform*: this case explores the motivations behind the relations established among second generation Moroccan teenagers and young adults using this popular blogging site in France. In particular, it looks into the importance of ethnicity and nationality, as opposed to social and geographical proximity, for the development of affinities within these social networks.
- *Romanian blogging embroiderers in Europe*: this case shows the role of Web 2.0 as a multiplier of relationships (corridors) between the home and the host country, developing around social networks based on shared interests and hobbies (here embroidery).
- *The image of the successful Romanian migrant on YouTube*: this case again explores the changes in relationships between the home and host country, using a series of videos published on YouTube by Romanian migrants abroad and their peers in Romania that parody traditional representations of success abroad.

From a methodological standpoint, these studies are based on an innovative web information system which was partly tested and further developed through them. The system enables us to monitor virtual spaces of migration by using various approaches and tools to understand their structure by analysing and conceptualising them via cartography (spatial representation). This system includes three components: extraction (data collection), indexing and storage, and data processing (information analysis). In some cases, online data extraction was complemented by interviews with blog owners.

Main Findings: Web 1.0 working for diasporas

The study of web portals and forums confirms the hypothesis that Web 1.0 is well suited to support traditional diasporas, inasmuch as:

- These sites nourish and mediate memories of the home country and the desire to go back.
- They create platforms for information and services, helping migrants in the pre-departure phase to plan their move abroad.
- They structure the migrant community by providing and managing a 'virtual home' (especially by way of the forums) for community life and organisation.
- They support the integration of migrants in the host countries by constituting a memory of migration experiences and providing information on institutional integration paths.
- They aim to regenerate the community abroad, by giving it an institutional existence and favouring online and offline activities.

Web 2.0 applications can also be used to prolong and sustain such diasporic practices, as found in the case of the French-speaking Afro-Caribbean online community.

Main findings: Web 2.0 disrupting diasporas

The exploration of the Moroccan blogosphere (in which migrants play a central role) reveals that Web 2.0 brings changes in the way that migrants organise themselves collectively. There is a shift from the few catalytic entities/authorities (the Web 1.0 portals) to a multiplicity of centres of 'authority' (blogs with a large number of incoming links).

The research on Moroccan migrant musicians on *MySpace* showed how Web 2.0 enables the transformation of social networks into relationships also geared towards cultural and economic production. In this context, self-exposure is a means of getting recognized.

The study of Romanian embroiderers' blogs scattered throughout Europe unveils the multiplication of corridors and topics of interaction within the migrant community and with the home country. Corridors take as many forms as there are centres of interest shared by a subset of individuals belonging to this scattered community. The traditional diasporic corridor, which relies on the reference to the homeland or nationality, does not disappear but is now included in, or rather articulated with, a series of new corridors.

The study of second generation Moroccan immigrants using *Skyblog* reveals that one's affirmation of ethnic or national belonging, often through the use of symbols that reflect such affiliation, does not imply active participation in collective life. These symbols can be mere tools for self-affirmation.

Finally, the parody of a successful Romanian migrant abroad on *YouTube* shows that social networking sites can be a place where relationships between migrants and those who stayed back home (which may comprise, as in this case, tensions and conflicts) can be actively reshaped, in this case in an almost carnival-like fashion. The new 'corridors' that are created online are like theatres where parodies of the migratory reality and the images it conveys can be replayed.

Conclusions on integration

Based on these findings and other complementary IPTS research,⁵ two types of ICT/Web-enabled integration processes of migrants in the host society can be distinguished:

- *top-down integration* which relies upon online official welcoming and integration services. These are offered by institutions, especially public authorities and sometimes by nongovernmental organisations or private companies. Diaspora websites typically link to these services;
- *bottom-up integration* relies more on informal relationships and hospitality stemming from social networking processes, also enabled by ICT, between newly arrived migrants, already settled migrants (including second generations) and members of the host society. Web 2.0, by supporting weak ties established both online and offline, seems well suited to sustain this kind of integration.

Although bottom-up integration is often an auto-generated, self-sustaining process, policies could aim to improve migrants' access to digital equipment and training in order to stimulate and intensify this kind of integration which is already at work.

⁵ See case studies reports on France, Germany and Spain at <http://is.jrc.ec.europa.eu/pages/EAP/eInclusion.html>

The report ends with a recommendation to policy makers concerned with information society and/or with migration/integration issues, namely to take into account the ever more widespread presence of the 'connected migrant' (as opposed to the traditional view of the uprooted migrant) whose aim in a world characterised by generalized mobility and communications is staying connected or circulating and keeping in touch.

I. State of the Art on Social Computing

Introduction – what is Social Computing?

The notion of Social Computing refers in general to the development of social behaviours and the genesis or strengthening of social ties through IT systems. In a narrower sense, it means the second generation of online communities and the tools and services related to them, and as such is closely linked to the Web 2.0, explained in definitive laymen's terms by Tim O'Reilly in 2005 (O'Reilly, 2005). Web 2.0 refers not so much to the technical transformations the Internet has undergone but rather to the new ways of developing and using the Web. It may be posited that Social Computing refers more to usage and the social dimension of new Web applications whereas Web 2.0 refers more to technological aspects though this distinction should not be made methodologically as in Social Computing/Web 2.0. In effect, we are witnessing a blurring of some traditional separations of meaning as we shall see in our presentation of the main properties of Social Computing before we turn to the tools, practices, and more specific issues in question.

In Social Computing, there is a dichotomy between development and use, and more generally, between production and consumption which tend to fade into one another. The most significant example here is perhaps the collective writing that takes place on the *Wikipedia* encyclopaedia. It operates on the wiki principle that allows all articles to be modified by everyone and therefore calls for collaborative control within the community where a reader may become first a writer and then a coordinator by participating in discussion pages on each article (Viégas et al., 2007; Bryant et al., 2005). Social Computing software applications enable users (whether this means a person, group, or even an enterprise) to become suppliers, co-producer and even innovators of content, contacts, evaluations, connectivity, etc. (Pascu et al., 2007). Applications for collaborative filtering, collaborative tagging, and social bookmarking and others are increasingly being developed in this area.

If the term Information and Communication Technology (ICT) tells us something about the two dimensions that make up these technologies – that is, an informational dimension and a communication dimension – it may be asserted that the development of Social Computing has progressively subordinated the first to the second unlike the Web 1.0 in which communities were above all formed around specific contents. Value here stems not so much from publishing information but from participating in networks, i.e. from an activity consisting in producing increasingly relevant connections between various actors or between actors and contents. This primacy of communication is at the origin of the development of new forms of organization and social relationships, which are removed from the demands of 'traditional' societies in which the existence of these social groups assumes physical proximity and strong ties or bonds (whether familial, sentimental, or professional). What appears here then is a force of weak ties. What develops here is what we could call actor-focused communities of interest or opportunity. The notion of community with this particular meaning is often considered as the pillar of Social Computing as it favours a bottom-up type of innovation to the detriment of top-down innovation where value depends more on experience rather than ownership, which thus shifts the power from institutions progressively towards communities (Charron et al., 2006). Let us note, however, that individuals using Social Computing applications often, at the outset, have strictly personal objectives and only form social ties as time passes. This allows the assumption that Social Computing is rooted in, and inseparable from, a certain kind of individualism whose co-existence with heavy social activity is made

possible by the very nature of the ties that are formed and that enable weak cooperation (Aguiton et al., 2007).

From an economic viewpoint, the roles of producer and consumer tend to blur in the sense that the consumer produces, distributes, and chooses content and services, thereby reducing the asymmetry of information between economic agents by increasing their interactions, i.e. by using and developing collective intelligence (Pascu et al., 2007). It is also necessary to insist here on the relatively low costs of developing Social Computing applications, not only in terms of equipment, but also in terms of data collection and application development: shared programming codes, creation of Web platforms with programming environments, or even the greater flexibility of Web 2.0 programming languages, all of which make application development less expensive (O'Reilly, 2005). As for data, it becomes more open as shown by the practice of mash up, where data from different sources is combined and reused to create an innovative application (Beer et al., 2007).

Two key technologies/practices in Social Computing

Blogs

Blogging is one of the most widespread activities on the Internet today. It is true, however, that the definitions of the term blog vary and are not always in agreement. If one gives a structural definition to the term, one may state that a blog is a set of “frequently updated web pages with a series of archived posts, typically in reverse-chronological order” (Nardi et al., 2004). One may also posit that blogs are somewhere between personal web pages and synchronous communications systems (for example, chats). Blogs have features of the former, but are more dynamic due to the facts that they are frequently updated by various people and that users may post comments. As for the latter, blogs allow inter-personal communication, but do not imply immediate responses like the chat-type systems do (Schmidt, 2007). It is necessary here to underline that a blog must belong to a network in order to be successful. There are several modes in which blogs are linked and connected on the Web (Schmidt, 2007):

- *Permalink*: a URL given to each entry in a blog that allows specific quotes. The *Trackback* feature makes these links reciprocal by adding a backlink from the quote blog to the author of the quote.
- *Blogroll*: a list of links pointing to other blogs, such as friends' blogs.
- *Comments*: messages left in response to blog posts. They are essential and even the condition for a blog to become popular (in terms of the frequency of posts) or even survival; blogs with few comments often die out.

These definitions and descriptions can not, however, be specified uniquely by indicating the nature of the content published on the blogs as many different kinds of content exists: personal experience stories, political opinions and analysis, pictures from trips, etc. This makes it impossible to say that blogging is one specific genre of writing. Nor can blog writing be compared to existing forms of writing such as the personal diary, journalism (amateur), etc. This type of extrapolation and generalization obscures the originality of the highly varied blogging practices (Boyd, 2006).

Nonetheless, it is possible to draw up a blog typology that does not overlook the highly diverse nature of blogs. It is based on three components: the self-statement, or production of self; the statement, or production of content; and reception, or production of an audience. D.

Cardon (Cardon, 2006) distinguishes four types of blogs (“four relationship configurations between the ‘statement maker’ and the ‘statement made’” which define “four relational configurations linking persons to published content”) that may, in practice, be mixed together:

1. *Sharing of inner landscapes*: the stated content is personal and intimate, and can not be disassociated from the person making the statement, who must be seen as part and parcel of the statement itself. A blog audience is a halo and the author of the blog establishes privileged relationships with a limited audience made up of readers who have been unknown until then and who rarely dialogue with each other. The network of personal blogs has few external Web links.
2. *Continuous conversation*: the content refers to the environment, activities, and daily interactions of the blogger. Statements are styled in the family conversation model and off-line social relationships, and the audience is primarily composed of individuals close to the blogger him/herself: family member and/or friends like a nebula or clan, with the blog acting to strengthen pre-existing ties. The network of blogs that are used for every-day interaction has few external Web links.
3. *Peer recruitment*: content is linked to the individual skills and interests of the speaker, who, as a result, only presents a single facet or his/ her personality. A blogger seeks a community of peers (professional or personal) who share similar interests and personally knowing those peers is of little or no importance. The network of community blogs has many external web links.
4. *The ‘citizen’s’ statement*: contents are disassociated from their authors in order to “display the marks of distancing required for disseminating an opinion, passing judgment, or making criticism in a public space” (Cardon, 2006). Blogs belonging to the ‘political Internet’ are in this category. Here, one “assumes responsibility for the statement” as the author’s identity is made public. The network of citizen blogs feature strong polarization and A-list blogs occupying the top of the hierarchy capture most of the comments made and hypertext links, following the law of power. This network has many web links.

Let us add here that the law of power mentioned above is manifested in the reticulate structure of the blogosphere in general insofar as the majority of bloggers produce content consulted by a very low number of readers whereas a minority of bloggers are read by a great many internet surfers (Marlow, 2005). From this, centrality and periphery phenomena arise that show the hierarchical structures while influencing the circulation of information through the blogosphere (Schmidt, 2007).

Lastly, blogs may be analyzed as media (Boyd, 2006) in the McLuhan sense of the term, as an ‘extension of man’ that provides individuals new means of expressing themselves. Understanding what a blog is assumes identifying the practices this medium enables. As with any medium, a blog is flexible and constantly developing, allowing for various types of expression. In this sense, the limits of a blog are constructed socially and are not entirely determined by technical criteria.

Social Networking Sites

The most famous Social Networking Sites (SNS) today, *MySpace* and *Facebook*, are a particular type of virtual community, formed mostly around individuals themselves rather than around content or specific areas of interest: “Social networking sites are online spaces that allow individuals to present themselves, articulate their social networks, and establish and maintain contacts with others” (Ellison et al., 2006). There are three stages to using SNS:

- *Profile creation and updating*: the user defines his/her profile; the profile contains an information list on the user's online identity. The user fills in his/her name or pseudonym, date of birth, town, and sometimes his or her ethnicity or religion; pictures may be included, or areas of interest, etc.
- *Creating a network of 'friends'*: the user creates a list of friends with whom he/she now shares a link. The link is not qualified or contextualized, or poorly so. For example, the place where the two 'friends' originally met is linked here. On some SNS, including *Facebook*, the link has to be mutual i.e. it has to result from a request by one user then agreement or refusal by another user whereas on other sites, including *MySpace*, it can be unidirectional. Lastly, we note that on some SNS sites, users may sign up for groups or causes they support.
- *Viewing and browsing among the network of other users*: viewing and browsing lists of friends in the membership of a network is not always allowed. It may only be open to the friends of a given profile. However, since one of the winning features of SNS for users is to make visible the respective social networks (Boyd et al., 2007), viewing and browsing are essential components.

The reasons for using SNS are varied but one may, nevertheless, posit that the main reason is a wish to maintain relationships or create new ones and to communicate. This, in turn, implies a series of activities: "sharing photos and archiving events, getting updates on activities by friends, displaying a large social network, presenting an idealized persona, sending private messages, and posting public testimonials" (Dwyer et al., 2007).

When it is asserted that SNS are founded on establishing connections with member friends, a distinction must be drawn between strengthening pre-existing social ties and creating new ones i.e. between the online reproduction of a pre-existing off-line social network and the creation or extension in an online network that might possibly lead to offline meetings. The first research on virtual communities (Wellman et al., 1996) hypothesized that users of these systems were connecting to users who were outside their pre-existing group(s) or places they lived, which would allow individuals to set up communities based on shared interests and not on geographical proximity (Ellison et al., 2006).

Although in the first community-based sites, users established ties with people with whom there had not been any offline contact, it seems that this is not at all the case of the SNS that many users use to enter into contact almost solely with the people in their physical entourage. It has, furthermore, been asserted that the success of the first SNS, *Friendster*, created in 2002, was due to the principle on which it was set up i.e. to meet friends of friends with common interests rather than strangers. The principle here came from the assumption that friends of friends are more likely to be the ideal romantic partners than unknown persons (Boyd et al., 2007). In that sense, a report of the Office of Communications (Ofcom) dedicated to social networking shows that only 17% of adults use their profiles on SNS to communicate with persons they do not know offline (Ofcom 2008).

This does not, however, mean that SNS are only the reflection of offline social networks. First, it must be noted that the strengthening of ties very often concerns weak ties, which would be threatened with extinction without this maintenance factor. Also, the activity of weaving new ties cannot be overlooked. It follows that the study of the ways these two forms of connectivity are mixed together is essential. It is also essential to understand the relationships between online relationships and off-line relationships, between what is real and

what is virtual, that is, not set them in opposition to each other but reveal how they are articulated.

The privacy issue, or possibility for individuals to control the flows of information about themselves, is one of the fundamental stakes of the research on SNS (Dwyer et al., 2007). Although there are numerous offline social relationships that leave no trace behind, that is not the case for online relationships, and in particular, those on SNS as these sites keep track of all interactions. Is it possible to implement the same policies and data protection mechanisms ensuring a level of privacy that exist offline?

Social networks and social capital

Topic networks and social networks

This brief overview of blogs and SNS has demonstrated the basic role of connectivity, construction, and participation within a network via Web 2.0 applications. However, it must not be inferred that this is a wholly original phenomenon with no relevance to Web 1.0. Communities on the Web have existed since the beginning of the Internet era. So by studying the distribution of hypertext links between Web pages, we were able to show that, far from being arbitrary, the Web answers to certain structuring and regularizing principles relative to information geography. By viewing Web pages as nodes of a graph and hypertext links as its curves, it was possible to devise general models of the Web as a space. The notion of aggregate was then used to mean packets or clusters of pages that can be singled out due to strong density in terms of hypertext links with regard to the average density of the Web. Furthermore, it was noted that this topological structuring could be correlated with semantic structuring such that these clusters showed themselves to be none other than the manifestation of topic communities. Lastly, within these communities, the role of the various nodes (pages or web sites) were differentiated; some playing the role of Hub (generating a high number of outgoing links) and others playing the role of Authorities (references to which a high number of links point) (Ghitalla, 2004).

Graph drawing methods were used to study the configurations of links in the areas of scientology, abortion, NGOs, the Zapatista movement in Mexico, or even the extreme right in Italy to show how link configurations point to alliance and affinity systems (Tateo, 2005). Automated graph drawing tools, UCINET in particular, are sometimes used though they are not used as 100% substitutions for manual exploration. For example, only manual exploration is able to reveal the nature of these links, since they may reflect hostile relations or alliances between web sites.

It is necessary to distinguish topic networks and social networks per se, as the two are two different types of Web communities. The purpose of a blogger or user of the *Flickr* photo publishing site, for example, may be to establish interpersonal relationships online or extend them offline, but that same individual may also only have these relationships as a means-to-an end relating to their areas of interest (hobbies, politics, etc.). In other words, the point here is to distinguish the various platforms as part of social media, on the one hand, and, on the other, as topic clusters (Pissard et al., 2007). This is certainly above all a research methodology distinction since the limits to what are means and what are ends necessarily blur at this juncture. It is, nevertheless, true that certain aspects of the distinction are real as the “consecration” of SNS has shown. Here there is little doubt that their aim is almost exclusively to link persons who very often have few interests in common. At this point, the

social network form comes to predominate the topic network, which was not as clear in the blogosphere where these two forms do co-exist and, at times, may overlay one another.

Thus, beyond representing territories on the Web in graph form, specially developed tools were used to enable visualizing social networks on the Internet. In this regard, the Vizster software application represents social networks (of the *Friendster* platform) in graph form where the nodes are made up of individual profiles and the links by the relationships between friends. Its capabilities include searching profile content, browsing inside the network, and breaking it down into groups of friends. It is a valuable exploration and analysis tool for any researcher working on online social networks both from the point of view of topology (connectivity) and profiles (identities) (Heer et al., 2005).

Some key concepts in (social) network theory

Studying Social Computing thus requires mobilizing *network theory*, which applies “to a variety of levels of analysis ranging from small groups to entire global systems” (Kadushin, 2004). The notion of network may be defined as follows: It is a set of objects (nodes) and the relations (links) between these objects. We are particularly interested in social networks here. The following three concepts are basic to understanding the relationships between nodes (individuals) in a network:

- *Propinquity*: Two individuals are more likely to be friends if they are geographically near to one another. They are more likely to be connected and have a relationship if, for example, they also go to the same sports’ club or school.
- *Homophily*: Two individuals are more likely to establish connections if they share common attributes in terms of age, gender, race/ethnicity, education, status, among others (Yuan et al., 2006). This property is often illustrated by the phrase “birds of a feather flock together.”
- *Distance between any two nodes*: This means the minimum number of steps (number of links) in going from one link to another in a network. The distance issue in a network was also the topic of a study on small worlds carried out by Milgram (Milgram, 1967) where he conducted experiments showing that the average distance between two individuals, whoever they are, living in the United States was six links, whence the famous expression ‘six degrees of separation’.

If one looks beyond simple inter-individual relationships to the properties of the network taken as a whole, other phenomena appear:

- Particularly relevant for us is the position phenomenon. These are nodes with many degrees of centrality (the number of nodes to which a single node is connected) in terms of the average degree of centrality of the other nodes. So if a hierarchy re-appears in networks, this is not observed due to content but by the position occupied in a certain space. The content itself is provided by the nature of the flows or connections (relationships of friendship, export of capital, consumer choice) (Kadushin, 2004). Inversely, one can speak of peripherality to mean nodes that have a weak degree.
- This absence of uniformity in the distribution of links within networks is also behind their segmentation, or fragmentation into defined groups or clusters, as we said before, by high hypertext density in terms of average network density. Let us add that this density often translates, in sociological terms, into cohesion, which may take various forms: the convergence of unilateral attachments to a single node, without which the group dissolves, and multiple reciprocal links, to name just two.

Social capital

The structure of social networks, analyzed by using tools and concepts from network theory, is often considered to be a very good tool to measure an individual's or group's social capital (Prell, 2003). This now brings us to clarify the concept of social capital.

It is not alien to the theory of capital developed by Marx, which must be stated as the origin of the concept of social capital. Indeed, Marx thinks of capital not only as the result of a production process but also as the very instrument process through which surplus value is produced and raised by the dominant class. In that sense, the theory of capital is a theory of social relations, and more precisely, a theory of the relationships of exploitation of one group by another (Lin, 1999).

It is this theory that Bourdieu reworks and transforms through the concept of symbolic capital to mean a series of investments through which the dominant social class reproduces a set of symbols and meanings that will be interiorized by the dominated classes (Lin, 1999). But, Bourdieu also wrote one definition of social capital as being “the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition” (Bourdieu, 1986).

Numerous other definitions of social capital have been proposed. Putnam's is particularly relevant: “Social capital refers to the collective value of all social networks [who people know] and the inclinations that arise from these networks to do things for each other [norms of reciprocity]. The term social capital emphasizes a wide variety of quite specific benefits that flow from the trust, reciprocity, information, and cooperation associated with social networks. Social capital creates value for the people who are connected and – at least sometimes – for bystanders as well. Norms of reciprocity (mutual aid) are dependent on social networks” (Putnam, 1985).

The concept of social capital has been used in many fields/areas: public health, crime rates, and financial markets, just to name a few. The decline of social capital (as Putnam has observed in the United States), linked to the loss of self-esteem, is the sign that a community is experiencing social upheaval, reduced participation in civil matters, and possibly a loss of mutual individual confidence. On the contrary, an increase in social capital is favourable to commitment to a community and the aptitude to participate in collective activities, etc. (Ellison et al., 2006).

Social networks are seen then as an effective means of producing social capital insofar as they multiply the channels through which community members may meet, interact, communicate, and exchange information and resources (Prell, 2003). By facilitating the creation of what Granovetter calls weak ties (Granovetter, 2000), these networks enable participation in various social contexts and, in particular, contribute to job searches and thereby to economic and social integration.

Finally, it is necessary to distinguish two forms of social capital: bonding social capital and bridging social capital. The weak ties we have mentioned are part of the production of bridging social capital as this capital refers to connections that are above all ones involving information exchange or the opening up of prospects or opportunities – in particular professional ones – without implying any emotional involvement. On the contrary, bonding social capital refers to propinquity relations, emotional relationships such as ones within a

family or groups of friends (Granovetter 2000; Ellison et al. 2006). There are also these definitions of the terms: bonding social capital is “the type that brings people who already know each other closer together” and bridging social capital is “the type that brings together people or groups who previously did not know each other” (Gittell et. al, 1998). The latter is questionable as it pays no heed to the difference between weak links and strong links and thus the fact that maintaining weak links very often stems from bridging social capital.

Social capital and social computing

What does our overview of Social Computing technologies and practices, in particular blogs and SNS, teach us about the development of social capital in Internet networks? The blog typology we have sketched out shows that in blogging, connections within pre-formed communities (families, groups of friends, etc.) and the connections centred on common interests or practices, beyond these communities themselves, are mixed together. The blogosphere is a continuum in which extremes are made up of these two pure state types, the first of which corresponds to a form of bridging social capital, and the second of which to a form of bonding social capital. But in the majority of cases, it must be asserted that the two overlap in complex ways with greater or lesser doses of one or the other such that the context of use, the desires and purposes of a blogger or group of bloggers are essential for determining the type of social capital put into play. The same may be said of SNS where these two types are also mixed even though it might seem that taking the opposite stance to what had been announced at the time of the advent of the first virtual communities: the offline social context user is of foremost importance. It is not surprising that the most popular SNS at the moment, *Facebook*, was originally a social network reserved for the students at Harvard College and gradually was extended to other universities, then high schools, and large companies before becoming freely accessible to everyone. In that sense, it seems impossible to posit that online social networks are completely devoid of the two network properties pointed out above: homophily and propinquity. It is again necessary to posit that it is not by placing real and virtual online and off-line social relationships in opposition to each other that we may grasp the uses to which Social Computing is put; this may be done by continuously placing ourselves at their point of intersection (Rybas et al., 2007).

That is why the way in which Social Computing may be likely to increase the social capital of an individual or group, on the one hand, and how it might reduce it, on the other, by making face-to-face relationships less likely, for example, should not be overly stated. These two processes are not separate from each other but are rather, as it were, two sides of the same coin.

One study on this subject states: “we can definitively state that there is a positive relationship between certain kinds of *Facebook* use and the maintenance and creation of social capital” (Ellison et al., 2007). The authors of this study were interested in the uses of *Facebook* by the students at Michigan State University. They show that the uses are above all directed at extending existing offline connections: the movement here is almost solely “offline to online.” As for the structure of the *Facebook* platform, which at the time was only open to individuals with an email address at that university, the authors assert that it was part of forming a geographically bounded online network. That is not to say, however, that it was only about forms of bonding social capital. Indeed, *Facebook* enables users to maintain weak ties that are typical of bridging social capital, or rather, to convert latent links into real links.

Digital divide and social and cultural differences

Digital divide

The study of the uses of Social Computing applications by immigrants and ethnic minorities (IEMs) should be rooted in an understanding about what is commonly known today as the digital divide. This issue is stated in terms of Internet access and, more generally, access to digital technologies. Despite the prospect of a revolution in communications and the democratization driven by these technologies, one can not help but observe the fundamental role that variables such as education - and more generally, social variables – continue to play with regard to Internet access. Although it has been shown – at least in the United States – that the gender gap tends to be blurring, “the perception persists that the gap for race is not decreasing” (Hoffman et. al., 2003). However, even when information is accessible to everyone, a variety of other factors comes into play and continues to widen the knowledge gap: it is the nature of the information itself, and whether it is likely or not to be exhibited and debated in an individual’s social network, that determine the appropriation and use of these technologies (Hoffman et. al., 2003).

This last remark allows us to foresee that the digital divide should not be viewed solely in terms of equitable distribution of computer equipment. “Believing that the digital divide can be overcome with a distributive solution that simply reallocates computing resources is problematic for two reasons: it is ahistorical and technologically deterministic” (Kvasny, 2005). Here Kvasny is proposing discourse analysis of the digital divide and asserts that it is constructed around a conception of Internet use as an instrument and an exclusive comprehension of computer processing skills as resources for participation in the economy and employment. This discourse overlooks the social and communication uses of the Internet. The author thus reminds readers that ‘Information Technologies’ is a pluralist concept that includes the social context in which information systems are embedded. To separate technical aspects from the social aspects is – while attempting to remedy the purely material (equipment) part of the digital divide issue – to authorize and even favour the reproduction of social inequalities. That is why a socio-technical perspective should be emphasized (Kvasny, 2005). In other words, the digital divide should be viewed as inseparable from the social divide and, more generally, the use of ICT should be understood in terms of social and cultural differences.

The Internet as a place of social and cultural differences

Let us not forget that our point of view does not seek to study the articulation of two entities – the social and the technical – to ascertain their mutual influences, their interdependence, etc. to uncover, for example, the role of ICT in the reproduction of upper classes. As we have already indicated, we do not intend to dissociate the terms social and technical by bringing them together in a second analytical stage, but rather consider them as a single term meaning the meeting point between the real and the virtual. This topic has rarely been formulated as such. A more precise definition of the problem can be formulated by using a series of illustrations and interrogations.

It is indeed interesting to look at the cultural and national differences in the ways social media are being used. This analytical angle was what made it possible to study the role of various differences in the way articles were written for *Wikipedia* (Pfeil et. al., 2006). This example is particularly interesting for us given that Wikipedia is a collaborative site whose content is edited by various users. Hence, it is a site where various differences (in terms of writing style, updating/correcting outdated versions) must be worked out. In analyzing the ‘history’

page of written articles, which allows users to see all changes made to an article, the authors of this study have come to the conclusion that the Internet can not be seen as a culturally neutral space and that pre-existing cultural differences play a highly significant role (Pfiel et. al., 2006).

Although these conclusions may not be surprising, it is a completely different story for the SNS called *Orkut* (Boyd, in press). *Orkut* began as an individual project lead by a *Google* employee but shortly after its launch it became a full-blown *Google* project. Yet, while on the majority of SNS users belong to the same cultural and linguistic group to such an extent that one could often name SNS after countries (although this is currently changing with “international” SNS like *MySpace* and *Facebook*), *Orkut* has a different configuration and hosts several different national communities. Paradoxically, however, even though the platform was developed in the United States, it never took root there. Instead, it has been Brazilians and more recently Indians who have appropriated it. Yet, although they share the space of a common site – on which, let us not forget, links and communication are fundamental –, these two communities interact very little. A similar phenomenon has been noted with the SNS called *CyWorld*, which hosts two communities, Chinese and South Koreans. In this case, the two communities are divided into two distinct spaces in such a way that communication between the two groups is not possible (Boyd, in press). What is more surprising is that the Indian community on *Orkut* was segmented according the cast system of Indian society.⁶

Similarly, Boyd has noted that on *MySpace* there is a marked division according to race and age (Boyd, in press). In a blog post called “Viewing American Class Divisions through *Facebook* and *Myspace*,” she mentions a form of fragmentation that is being observed among American adolescents between *Facebook* users and *MySpace* users:

“The goodie two shoes, jocks, athletes, or other ‘good’ kids are now going to Facebook. These kids tend to come from families who emphasize education and going to college. They are part of what we’d call hegemonic society. They are primarily white, but not exclusively. They are in honours classes, looking forward to the prom, and live in a world dictated by after school activities. MySpace is still home for Latino/Hispanic teens, immigrant teens, ‘burnouts’, ‘alternative kids’, ‘art fags’, punks, emos, goths, gangstas, queer kids, and other kids who didn’t play into the dominant high school popularity paradigm. These are kids whose parents didn’t go to college, who are expected to get a job when they finish high school. These are the teens who plan to go into the military immediately after schools. Teens who are really into music or in a band are also on MySpace. MySpace has most of the kids who are socially ostracized at school because they are geeks, freaks, or queers.”⁷

These conclusions have been supported by other researchers’ textual analyses of *MySpace* and *Facebook* and by examining stereotypes generated by visiting certain *MySpace* member pages in the case of adolescents of Mexican origin (Gajjala 2007).

⁶ <http://differentstrokes.blogspot.com/2006/09/caste-communities-on-orkut.html>

⁷ <http://www.danah.org/papers/essays/ClassDivisions.html>

The Web as a space

The question raised above regarding the social and cultural differences on the Web is intimately linked to the question regarding Web as a space, as a geography. In effect, we know about the social and political dimension of space and how it is regulated as illustrated, for example, by the role of territorial cartography in the colonial conquests, the political and symbolic dimension of borders and their limits, or even diasporic processes. Yet, the discourse on the Internet conveys a set of spatial metaphors: information highways, visit a Web site, cyber-space, etc. If we accept that the Internet provides a new way of experiencing spatiality and presence, it then becomes necessary to ask ourselves how virtual spaces are reshaping our rapports to real spaces, or rather how the two are mixed together to form new relationships to space (Mitra et. al., 2001)? While we do agree with the question raised by Mitra, we can not, however, agree with answers she proposes insofar as according to her the rhizomatic form of networks takes any meaning away from the notion of boundary, in which real spatiality and virtual spatiality tend to oppose one another and open onto a type of schizophrenic existence. In this sense, when she mentions the possibility of creating synthetic spaces, for us the question remains as to how such a synthesis could be constructed from these types of axioms. Regarding the definition of SNS as ‘spatially-bound networks’ (Ellison et. al., 2006), she radically questions the idea according to which the Web is a space that is smooth, uniform, undivided, etc. More generally, it is the question of electronic borders that begs response, with borders surpassing physical geography and becoming delineated in the form of files and databases. The Schengen Information system, which lists sought after individuals under surveillance or categorised as ‘undesirable’, comes to mind (Dimenescu, 2001).

Accordingly, we can consider the Internet as a space that is “active, operational and instrumental as it is productive and performative of knowledge and relations of power. The geopolitical reference points to locate individuals and data within special coordinates thus code users into the structure of social hierarchy” (Rybas et al. 2007). However, it is according to still another meaning that the Web appears as a space, a cyber-space, and while it is not Social Computing that is creating another spatiality, it must be said nonetheless that it expresses it perfectly: think, for example, about a *Facebook* profile: the profile is a combination of both the self, the individual, and space, a surface of contact. Put differently, it is an interface. Creating and updating one’s profile is hence an example of production of self as an interface with which others can interact (Gajjala, 2007). These considerations lead us to another fundamental question: that of the body and identity in the use of social media.

Social media and the construction of identity

Does becoming an interface not mean leaving ‘out of self’ the body and its features and characteristics? Just like it was necessary to undo the popular mythology according to which the Web is a lieu without heterogeneous places (placeless) and where social divisions dissipate, it is also necessary to undo the idea according to which the Web is a lieu where the body no longer plays a role (bodyless) (Rybas et al., 2007). Boyd wrote specifically about blogs, but her work could just as equally be applied to SNS: “The blog becomes both the digital body as well as the medium through which bloggers express themselves” (Boyd, 2006). She adds that it is often relatively easy to ascertain the key corporal elements of a person online: detecting, for example, that an individual is a man even though he is presenting himself as a woman (Boyd, in press). More generally, since our online practices are intimately related to our daily practices – material practices incarnated – and since online

practices and real practices interact with one another it is hence impossible to speak about a type of depersonalization or full-blown disembodiment.

But, if we are to understand this corporality, this incarnation, it is necessary to ask the question: how is identity constructed in social medias. “In everyday interactions, the body serves as a critical site of identity performance. In conveying who we are to other people, we use our bodies to project information about ourselves” (Boyd, in press). Yet, often it is these types of representations/productions of identity (identity performance) that users of social medias attempt to construct. Indeed, a profile on a SNS is a way of presenting and producing one’s identity online. However, as the body is not directly present in these medias and as the presentation of self occurs through images, videos, and especially text, users must learn how to write (or type) themselves into being (Boyd, in press) (Sundén, 2003). It is in this respect that we can speak of digitally mediated identities. Here as well, the opposition between online and offline practices falls away: the connected individual is unable to ‘magically’ separate him/herself from the socio-economic and cultural contexts in which the individual has been conditioned (Rybas et al., 2007).

The above considerations take on a specific aspect when applied to ethnic minorities. In this case, it becomes impossible to consider the Web as a space without races (raceless), a space where racial and ethnic stereotypes fall away (the same could be said for gender or social class). The white race is perhaps the Web’s default category, that is to say the assumed colour of a person in the absence of other corporal indicators. But, is this not the case also of the material world where white is seen as the norm? Put differently, white is the race that while being a race could also be considered as a non-race (Bajjala, 2007). One can not overlook the propagation and dissemination of images of race and of racism in social media, as well as the reproduction of stereotypes, or the creation of cybertypes. Identity tourism on the Web, role playing, or identifying with a character different from what is actually the case in reality also contribute to reproducing these stereotypes (Rybas et al. 2007).

Lastly, we must address the problem of the audience in social medias and the difficulty, even the impossibility, of dividing their audiences into several groups that each have access to certain facets of the person. In this respect, Boyd uses the example of the black American participating in the Black Power movement, Stokely Carmichael, and his experience with the radio and the television. Depending on whether he was presenting his ideas to an audience of Whites or an audience of Blacks, Carmichael used completely different rhetorical styles. This is why his popularity increased dramatically until he had to address mixed audiences, which forced him to choose one of the rhetorical styles. He adopted the style used for addressing Blacks, but in so doing he was unable to captivate the White public. Another example concerns a black American student living in a poor urban area who wrote a brilliant essay about gangs. He was about to be admitted into a prestigious high-school, but the admission committee discovered his *MySpace* profile, which was full of images related to hip-hop culture, indicators of gang participation, etc. Boyd explains that it is possible that this student was faced with the necessity of complying with environmental norms in order to survive and in order to be accepted into the high-school (Boyd, in press). These examples are interesting insofar as they cast another light on the idea (without, however, invalidating it) according to which one of the dangers of using social medias is the multiplication/fragmentation of identity. In effect, it appears that the reverse danger also comes into play: an excessively high level of identity unification reduces the multiple contexts in which the individual develops and circulates to one context open to everyone.

Social computing and ethnic minorities

Currently, we have very little data and analyses about the way ethnic minorities are using social media. The little data that does exist is almost limited to Blacks in the United States (other factors that are not scientific obviously enter into play here; we can not forget that in France, for example, ethnicity is not a category that appears in the official statistics). Although the present study concerns ethnic minorities in Europe, it is important to present the themes and conclusions of the two research projects conducted on this subject in the United States, even if only to gain a comparative angle for our study.

The first research looks at the role of black bloggers in the American blogosphere (Pole, 2005). Blacks make up 13% of the American population and are underrepresented in the blogosphere where they only represent 1% of users. However, “though they are less numerous, examining the role of minorities in the blogosphere is important if blogs are being used to engage in political discourse and discussion, and more importantly, political action that has real-world actions.” The author’s goal hence was to uncover the types of activities of black bloggers and the way in which they use their blogs for purposes relating to political problems. Pole formulated three hypotheses on the subject:

- “Black bloggers will blog about issues related specifically to race.”
- “Black bloggers will use their blogs to engage in and to encourage their readers to engage in various forms of political participation that occur both online and offline.”
- “Black bloggers will report that they face discrimination by other bloggers.”

Regarding this last hypothesis, it must be said that this type of discrimination may refer to a refusal by white bloggers to cite and establish links with black bloggers. According to the author, this type of discrimination could be another cause of the digital divide in the sense that black bloggers could have doubts about entering into a space dominated by Whites.

The study was based on interviews with 20 black bloggers. It demonstrated that they write on a variety of subjects which are not necessarily related to their minority status despite the fact that race and ethnicity do have particular importance alongside subjects about politics, parties, campaigns, and elections. These bloggers affirm that blogging is a type of political participation and they invite their readers to become involved in a variety of political activities, both online and offline. They also put importance on transcending geographical boundaries to be able to participate in politics in cities in which they do not live. Lastly, they indicated that a black blogosphere does exist, although they claim that there is no genuine multicultural blogosphere. The data collected also suggests that black bloggers are isolated from white bloggers and that discrimination does occur: Blacks sometimes fear the retaliation of white bloggers, especially when they write texts on questions of race.

The second research studied community life on the SNS called *BlackPlanet* (created in 1999 with 15.8 million members in January 2007) in order to find out if and how participants take part in public discussions, if these discussions are centred around issues related to the black community, and if the social networks are used to promote a type of civic engagement (Byrne et al., 2007). The authors, who base their study on the history of black social networks, highlight the absence of research in this area in the scientific literature. Although several works have been done on Internet uses by ethnic minorities, most of them have demonstrated the importance of community contents for online participation by Blacks. The conclusions drawn by this study are:

- While *BlackPlanet* members partake in discussions relating problems faced by the black community, these discussions go no further than discursive discourse on civic engagement. It must be concluded that collective action is not a necessary result of interactions on SNS despite the fact that the history of black social networks does attest to the role they have played in sparking such civic actions.
- It appears that organizing social movements is more difficult via social media than was the case with traditional social networks.
- The absence of any real genuine civic engagement points to the fact that the main black leaders are not present on *BlackPlanet*. This is a major difference between Blacks' traditional networks and online networks.

These conclusions, however, in no way demonstrate that it is impossible to move beyond the discursive phase of engagement on SNS. They only suggest that "the potential for mobilization through social networking online has not yet been realized, despite the traditional orientation to community service among blacks in America."

To the two mentioned studies, we can add the Ofcom report on the usage of SNS by ethnic minorities in the United Kingdom. "Respondents who use the internet from Indian (31%), Black Caribbean (40%) or Black African (41%) ethnic minority groups were more likely to have set up a social networking profile compared to all UK adults who use the internet (22%)". One of the reasons for this is likely to be the generally younger profile of ethnic minority groups – although this is not the only explanation (Ofcom 2008). This study also shows that it is in the African and afro-Caribbean minorities that links and interactions with strangers are the most numerous.

Preliminary conclusions on social computing and e-Inclusion

What does the research presented in this survey teach us about the issues of cultural diversity and e-inclusion as stated in the Declaration of Riga?⁸ We would like to answer this question as a conclusion. It will be brief given that our next step will be preparing case-studies, which alone will be able to refine, confirm, or invalidate what will only be a brief sketch here.

First of all, although the question of access to ICT – a material or technical question – remains essential, it must also be said, as was previously stated, that this question only makes sense if it is linked to the social and cultural issues relating to the nature of information, modes of communication, etc. Considering these two faces of one coin (the digital divide) as two distinct aspects is a big mistake. What the studies reveal is that although the issue of access has been investigated from multiple points of view, the forms/types of social inequalities at the crossroads of the real and virtual worlds have been neglected. In this sense, studying Social Computing uses and practices by IEM can only cast light on these understudied topics.

Is Social Computing an adequate vector for promoting pluralism, cultural identity, and linguistic diversity? The studies presented here point to the multiplication of online social networks and the gradual priority taken by individual-centred networks to the detriment of networks centred around specific interests or topics (without the former necessarily replacing the latter). Yet, national and cultural identity may be the prime factor for cohesion as attested by the diversity of ethnic social networks and, for example, by the existence of a blogosphere for the black minority in the United States. In this sense, we can only conclude that Social

⁸ http://ec.europa.eu/information_society/events/ict_riga_2006/doc/declaration_riga.pdf

Computing has a positive effect on the building of bonding social capital. That said one can not neglect the difficulties in transforming online interactions into real physical actions offline.

However, although Social Computing is indeed an instrument for community regeneration, it is still necessary to study the possibility of establishing links between different online social networks and to understand if there is, in fact, any production of bridging social capital via the formation of genuinely multicultural social networks. We have seen, for example, that although some SNS (*Orkut*, *Cyworld*) host several national communities, the various communities do not communicate with one another and even the site itself can be divided into several restricted areas. Some could challenge this by citing that there are in fact some universal SNS (*MySpace*, *Facebook*, etc.). But, in addition to the fact that it is possible that this universality is little more than masking the norms of a given group (a universality of the West, for example), it is also necessary to analyze the structure of these networks to find out if they are divided into mutually exclusive areas thereby further feeding the digital divide. Without prejudging the results of such an analysis, such a study can not overlook the trend social networks have of turning into bounded social networks.

Finally, concerning the contribution of ICT to the economic participation of IEM, we must notice the absence of any research that has specifically focused on Social Computing. However, as we see Social Computing as a bearer of new business models and if we think about the mixing roles of producer and consumer promoted by Social Computing, we believe that a whole new field of investigation opens up at this level.

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II. Epistemic Introduction, Hypothesis, Methodology and Tools from Web 1.0 to Web 2.0 in Migrant Communities

The shift from Web 1.0 to Web 2.0

As we have seen in the previous State of the Art section, the emergence of Social Computing has generated significant changes in many areas: ways of using the Web; types of media communication; development of relational aptitude strategies for network participation; the way online communities are structured; or, the modes of hybridization between the real and the virtual.

Our initial work led us to identifying certain ruptures between the informational Web 1.0 and the communicational Web 2.0 that will impact migrants. We also noted certain oppositions between the thematic communities of the former (the theory of aggregates comes to mind, which can be defined from a double standpoint – topological and semantic) often used by pre-existing communities (associations, institutions) and the individual-centred networks of the later. In this regard, we could hypothesize that one has replaced the other. This substitution phenomenon is implicit whenever we speak of the Web 2.0 age or era. However, it is undeniable that in some respects Web 2.0 only expounded upon or intensified phenomena introduced by Web 1.0.

In reality, neither one of these two alternatives – substitution or continuation – is satisfactory. Indeed, there are essential differences between what we call the two Web paradigms, their development, and their implications for use. However, these differences do not preclude various types of mergers, be they in the form of combinations and superimpositions, or even confrontation and resistance. What must be studied therefore are the modalities of the shift from Web 1.0 to Web 2.0. It goes without saying that there is no way that this shift can follow an identical law for all internet users. Each of the two paradigms opens new possibilities while excluding others in such a way that the needs, expectations, and demands of internet users are now greatly influencing Web practice. It is necessary to understand how this shift has occurred within specific groups or communities (these can be defined in terms of interests, but also according to sociological categories). We must hence grasp one set of collective problems that result from and affect the shift from Web 1.0 to Web 2.0. For this, the example of migrant communities is particularly relevant.

The shift and migrations

Has the migrant not become the very embodiment of the word ‘shift’, not only in terms of trans-border shifts, but more generally in terms of the shift transforming our societies to such an extent that the migrant is brought up each time these mutations need to be tested, namely the mutations leading towards the emergence of a multicultural Europe?

Let us not forget another shift, or another very recent mutation: the one generated by the arrival of Information and Communication Technologies (ICT). This transformed our ways of relating and communicating, and even redefined the notions of absence and presence. This gave rise to a culture of links as demonstrated by D. Diminescu.⁹ However, not only have

⁹ DIMINESCU D., « L’usage du téléphone portable par les migrants en situation précaire », *Hommes et Migrations*, n°1240, 2002, pp. 66-81 : <http://www.ticm.msh-paris.fr/spip.php?article26>. DIMINESCU D., Le

migrants appropriated these technologies at an astonishing rate, but they have brought profound innovations and inventions to the practices. They are the first agents in the culture of links, which can be coupled with a culture of mobility.¹⁰ In some ways, they are the precursors of what we can call a relational position based on mobility. The famous image of the uprooted migrant painted by A. Sayad¹¹ was characterised by a double absence: he is neither completely present in the home country, nor totally present in the host country. Although this concept has not disappeared entirely, it has now given rise to the connected migrant, who is characterized by having multiple affiliations, meaning that he is simultaneously present 'here and there'.

In this sense, for the migrant, integration no longer only entails a process of insertion and participation in a society or an internalization of its norms. Instead, it now means staying connected: intelligently combining mobility, autonomy, and communication; being able to play strategically with one's links and with the digital equipment which mediates this connectivity; finding a balance between relationships in the home country or its migrant citizens and those in the host country and its members.

These views about integration and the connected migrant are central in the present study; they guide all our questioning.

So what role does the shift from Web 1.0 to Web 2.0 play in this process? What is the magnitude of this shift in terms of reconfiguring integration practices and policies? At first glance, we would be tempted to say that it only reinforces trends already at work among migrant populations by intensifying connectivity strategies, encouraging multiple interpersonal relationships, and authorizing co-presences that are no longer only temporary but almost permanent. However, this view unjustly privileges one aspect to the detriment of all others. Its end result is standardizing communication, linkages, and lastly the migrating individual himself because it extracts him from any collective rooting.

It is thus necessary to pose other questions. For example, how do the types of information publication and organization like those found on web Portals (Web 1.0) or blogs (Web 2.0), or the exchange modalities offered by forums (Web 1.0), compare to those of online social networks (Web 2.0) and affect the existence and organization of migrant communities, but also the individual background of migrants?

As we will see in more detail later, Web 1.0 technologies and practices are particularly well suited to a diasporic lifestyle: highly organized communities that share political, religious, and cultural references, and which privilege the expression of common identity and multiples links, be they real or imaginary, to the home country. Moreover, the fact that in Web 1.0

migrant connecté, *Migrations/Société*, vol.17, n°102, pp. 275-292 : <http://www.ticm.msh-paris.fr/spip.php?article1>

¹⁰ «Il n'y a jamais eu autant de gens, par le passé, capables d'envisager comme chose allant de soi le fait qu'eux-mêmes ou leurs enfants seront sans doute conduits à vivre et travailler ailleurs que sur leur lieu de naissance. Des migrants qui, sous la couverture d'un visa touristique font le « commerce de valise », des touristes qui voyagent pour s'installer à la fin dans les pays de leurs vacances, des immigrés qui une fois avoir accès à la nationalité reprennent la circulation, des jeunes cadres dynamiques, des fous voyageurs..., tous sont sensés, pour leur stabilité, jongler entre différentes mobilités.» DIMINESCU D., Le migrant connecté, *Migrations/Société*, op. cit. Cf. also URRY J. (2000), 'Sociology Beyond Societies. Mobilities for the Twenty-First Century'. London Routledge; TARRIUS A. (1989) *L'Anthropologie du mouvement*. Caen: Paradigme.

¹¹ SAYAD A., *La double absence. Des illusions de l'émigré aux souffrances de l'immigré*, Paris, Seuil, 1999.

information producers and information consumers are clearly dissociated is well adapted to the diaspora model according to which associations and institutions play a catalyzing/leading role. On the contrary, Web 2.0 by empowering the individual seems to challenge such collective organizations in favour of individual expression and self presentation by bringing connectivity strategies into the individual's world, meaning that the potential types of associations, relationships etc. are multiplied. This places us more in the transnational network model. In sum, we can say that Web 1.0 corresponds to the diaspora paradigm while Web 2.0 falls under the paradigm of transnational networks.

Nonetheless, it seems evident that migrant populations are not living the Web transformations as a fate. Indeed, non-diasporic migrant communities did exist on the Web before the arrival of Web 2.0. We must avoid constructing abstract dichotomies, but rather examine how these communities and individuals are learning to play with the possibilities of ICT in order to make them serve collective and/or individual goals and integration issues of varying magnitude. In examining this, we can not overlook the fact that these technologies themselves have the power to transform collective modes of existence. Therefore what we need to look at is the way this complex game is being played out among migrant populations as we shift from Web 1.0 to Web 2.0. Formulating the issue in this way means that we also foresee that this shift can not be reduced to a simple acculturation of new technologies, a uniform assimilation. It is rather a question of superimpositions or a collage of the old and the new (existing vs. new web practices) ways of adopting, resisting, rejecting, appropriating, or rerouting. We must see the shift in these terms as the shift corresponds to a whole set of processes that are not always immune to contradictions.

To sum up, our research hypothesis is that we can observe the shift from Web 1.0 to Web 2.0 among migrant communities and that this shift introduces mutations in: forms of collective organization and living; integration strategies; the way the self is presented; assertions of individual and/or common (national, ethnic, etc.) identity; topics of interactions/exchanges; and the creation of economic opportunities.

Here, we shall test this hypothesis on two communities: Moroccans and Romanians. But, before presenting these communities, it would first be useful to put forward a few theoretical points regarding diasporas and transnational networks. For this, we will use in particular the collective work edited by William Berthomière, Lisa Anteby, and Gabriel Scheffer entitled *Les diasporas: 2000 ans d'histoire*.¹²

Diasporas and transnational communities

"Where once was dispersion, there are now diasporas," wrote Kachig Tölölyan in her famous article "Rethinking Diaspora(s): Stateless Power in a Transnational Moment."¹³ The fact that populations from different diasporas are today scattered across the world as well as across the web is a phenomenon that merits analysis. From the viewpoint of the human sciences, it is important to examine the processes that led to the transformation of the traditional concept of diaspora and to analyze its relevance in a society currently experiencing generalized mobility and in an environment that has been enhanced by communication and information technologies.

¹² ANTEBY L., BERTHOMIERE W., SCHEFFER G. (dir.), *Les diasporas : 2000 ans d'histoire*, Rennes Presses Universitaire de Rennes, 2005. We will also refer to BERTHOMIERE W., CHIVALLON C. (dir.), *Les diasporas dans le monde contemporain*, Paris, Karthala, 2006.

¹³ TÖTÖLYAN K., "Rethinking Diapora(s) : Stateless power in the Transnational Moment," *Diaspora*, 5,1,1996, pp.3-36

The root of the term ‘diaspora’ comes from Ancient Greek and is an extension of the transcription of the Hebrew word, ‘galou’t. Built using the Greek verb *speiro* (to sow) and the prefix *dia* (beyond), the term refers to the notions of migration and colonization. Initially, the Hebrew term referred to the implantation of Jewish populations outside of Palestine following the Babylonian exile. It progressively acquired a broader meaning to describe populations living outside their ancestral lands.¹⁴ The first attempts at theorization were done, according to Gabriel Sheffer, by J.A. Armstrong in his article called “Mobilized and Proletarian Diasporas” published in *The American Political Science Review* in 1976.¹⁵ In the social sciences, use of the term diaspora is more recent. Prior to the 1980s, it was mentioned on only a few rare occasions. According to Judith Shuval, the absence of the term is due to the fact “that before the 1960s, immigrant groups were forced to give up their ethnic identity in order to assimilate local norms. During the 1970s and 1980s, when the theory of assimilation and others on the notion of integration demonstrated their fallibility, turning to the notion of diaspora was done more and more frequently to describe migrant groups characterized by ethnic identity and a strong community sentiment.”¹⁶ The notion was, however, quickly challenged by researchers like Alain Médam¹⁷ or James Clifford,¹⁸ who expressed their dislike of the concept. For them, it could only be used to describe migratory phenomena characterized by the dispersion of populations originating from one national space throughout several receiving countries.¹⁹

On the other hand, William Safran, one of the first authors to publish a theoretical article in the North American journal called *Diaspora* (edited by Kachig Tölölyan) suggests that the term diaspora could be used as a metaphorical designation applicable to diverse populations (expatriates, political refugees, etc). In his essays (in 1991 and 1999), Safran defines diasporas as communities of expatriate minorities: 1. who are scattered from a common center into at least two “peripheral” spaces; 2. who maintain a memory – often even mythical – of their “homeland”; 3. who feel they are not nor can be totally accepted in their host country; 4. who see their ancestral land as a place of return at the right moment; 5. who are active in maintaining or restoring their homeland, and 6. for whom group consciousness and solidarity are highly defined by continuous links to the homeland.” Accordingly, during the 1990s several typologies were formulated to attempt to understand and describe diasporas. For Alain Médam, the typology must be based upon the degree of cohesiveness and the organizational dynamics of the diaspora. In this perspective, Médam distinguishes crystallized diasporas from fluid diasporas. Concerning the latter type, he presents a few cases of diasporas characterized by the effectiveness of their organization into transnational networks (the Chinese diaspora, for example). According to another specialist in the field, Michel Bruneau, the typology must be based on the specific type of diasporic organization. For this, three main types were defined around structuring poles: entrepreneurialism as is the case with the Chinese or Lebanese diasporas; religion with the Jews and Greeks; and politics in the case of Palestinians and Tibetans. By bringing the Palestinians and Tibetans into the picture, authors such as Michel Bruneau or Gabriel Sheffer have clearly introduced the political dimension, which until then had not been stressed in the literature on diasporas.

¹⁴ SHUVAL J.T., “The dynamics of Diaspora: Theoretical Implications of Ambiguous Concepts,” in Rainer Münz and Rainer Ohliger, *Diasporas and Ethnic Migrants: Germany, Israel and Russia in Comparative Perspective*, London, Frank Cass, 2003.

¹⁵ DORAI M. et al., “La circulation migratoire”, *Migrations Études*, n. 84, Dec. 1998.

¹⁶ BRUNEAU M., *Diasporas*, Montpellier, GIP Reclus, 1995.

¹⁷ MEDAM A., “Diaspora / Diasporas. Archétype et typologie”, *Revue Européenne des Migrations Internationales*, vol. 9, n. 1, 1993.

¹⁸ CLIFFORD J., “Diasporas”, *Cultural Anthropology*, vol. 9, n. 3, 1994.

¹⁹ DORAI M. et al., “La circulation migratoire”, op. cit.

The pioneering research published by Basch, Glick-Schiller, and Szanton Blanc in the 1990s brought forward the notions of transnational space, transnational community, and nations unbound.²⁰ In their contribution, these three researchers were able to synthesize the convergence of a cluster of questions where contemporary diasporas are perceived as ‘nations without borders’ (nations unbound), with reshaped relationships to territories. In contrast to the classic approach where the nation state is defined in terms of one people who share a common culture within one territory with established limits (bounded territory), this new way of thinking about territory²¹ and the Nation-State defines citizenship as “those who live physically dispersed inside borders of numerous other States, but who participate socially, politically, culturally, and often economically, in their original Nation-State.”²²

Among the group of specialists on diasporas, the difficulty of building a living lexicon becomes especially apparent in the contact zone between diaspora and transnational community. In effect, diasporas maintain a particular social structure requiring its own area of theoretical investigation. At the same time, the notion is progressively described as a particularity that falls under a globalized social form that covers the notion of transnational community.²³ This confirms the theoretical challenge of any attempt to differentiate diasporas from transnational communities. One hypothesis could be that there is no real difference between the two social forms, as suggested by Kachig Tölölyan when he pointed out that diasporas are model communities in the transnational moment.

Finally, we have to remember the first definition of transnationalism offered by the group of anthropologists composed of Basch, Schiller and Szanton Blanc. Transnationalism refers to “the processes by which immigrants forge and sustain multi-stranded social relations (family, economic, social, organizational, religious and political) that link together their societies of origin and settlement. We call these processes transnationalism to emphasise that many immigrants today build social fields that cross geographic, cultural and political borders”.²⁴

Diasporas’ Web 1.0 – transnational networks’ Web 2.0

Before presenting the main differences between diasporas and transnational networks, we have to define the notion of ‘corridor’ that will be central in our study. We can define a corridor as a route combining three properties:

- 1) it links two points A and B (origin and destination), in some specific way,
- 2) it transports specific elements (things, people, information etc.),
- 3) it uses specific media and follows specific laws of transportation.

In the context of migration, we can take the example of remittances corridors:

- 1) the corridor links a home country to a host country.
- 2) it transports a precious element called money.

²⁰ BASCH L, SCHILLER Glick N., BLANC-SZANTON C., *Nations Unbound: Transnational Projects, Postcolonials Predicaments and Deterritorialized Nation-States*, Basel, Gordon & Breach, 1994.

²¹ MA MUNG E., “Groundlessness and Utopia, the Chinese Diaspora and the Territory,” in E.Sinn (ed.), *The Last Half Century of Chinese Overseas*, Hong Kong, Hong Kong University Press, 1997.

²² BASCH L, SCHILLER Glick N., BLANC-SZANTON C., *Nations Unbound: Transnational Projects, Postcolonials Predicaments and Deterritorialized Nation-States*, op. cit.

²³ ANTEBY-YEMINI L., BERTHOMIERE W., SHEFFER G. (dir.), *2000 ans de diasporas*, Rennes, Presses Universitaires de Rennes, 2005, 497 p.

²⁴ BASCH L., GLICK SCHILLER N., SZANTON BLANC C., “Nations Unbound, Transnational Projects”, *Postcolonial Predicaments and Deterritorialized Nation-States*, Gordon and Breach, 1994, p.6.

- 3) it implies bank operations, technological means (e.g. a mobile phone on the user's side and a banking information system on the bank's side) and conditions established by the bank (minimum and/or maximum amount of money to transfer, transfer delay, etc.) or by broader regulations.

In the diasporic model, important corridors are what we can call the homeland corridors:

- 1) each links a centre, the home country, with a host country (many host countries can be linked together by other corridors);
- 2) it transports an imaginary of the homeland, some statement about it, an emotional engagement, a will to return etc;
- 3) it is formed through community (and eventually political) representation in the host country, through engagement in the community life, through building or preservation of collective memory, through investment in the home country.

Still in the diasporic model, practical information dedicated to migrants forms another corridor. We will show in this study that Web 2.0 introduces a multiplication of corridors according to the various activities, centres of interest and projects of the migrants, in terms of:

- 1) new paths,
- 2) new content or elements transported,
- 3) new means and laws of transportation.

Dimension	Diasporas	Transnational networks
<i>Collective Organisation</i>	Strong organisation around one or some catalytic entities or 'homeplace' structuring the community life	Multiplication of authority centres, places where community life is born and grows
<i>Economic Participation</i>	Mediated by associations, institutions presenting themselves as job providers or playing the role of relay/filter of job offer	Conversion of networks into relations of cultural and economic production (e.g. by the professionalisation of centres of interest)
<i>Topics of Interaction</i>	Finite number of corridors: country or territory of origin (homeland), information for the migrants, representation of the community in the host country, politics	Multiplication of corridors according to the various centres of interests, hobbies; according to the various concerns of the migrants
<i>Integration Strategies</i>	Top-down Integration. Offer of specific services issued by one or some recognised entities	Bottom-up Integration. Closeness relations (emotional, social, etc.) and hospitality as a source of integration

Migrant communities selected

Notes on using ethnic categories

In France, ethnicity (or home country) is not a legal category that can be studied statistically. This explains why we have such little data on the ways ethnic minorities use media and ICT. There are obviously subjacent political stakes at play, which scientific research can not overlook despite the fact that some researchers criticize using ethnic concepts. So how can we claim to overcome discriminations if discrimination (even positive) is already present in researchers' theoretical apparatus. This is but one of the many questions that the concept of ethnicity brings up. As for us, we must admit that we had a certain malaise in deciding to use the notion of ethnic minority in the title of our study, which implies the need to identify these minorities. What identification criteria could we accept? What criteria must we reject? We have opted to privilege the performative uses of ethnicity (and of original nationality), meaning uses in which the ethnic or national reference is the affirmation of a common identity, but we also base our work on sociological data obtained from the individuals directly concerned as well as the languages used whenever it was significant for us.

Before turning to the two main communities we have addressed, we would like to point out that we have also performed a short study, the conclusions of which will be presented later, on the Afro-Caribbean community. In fact, this community can be seen as an archetype of the structure and organization of ethnic minorities on the web, especially Web 1.0 as is proven by the high number of Afro-Caribbean sites, portals, and forums.

The Romanian community

The fall of the totalitarian regime in 1989 and Romania's integration into the European Union in 2007 has paved the way for diverse migrations (trans-border mobility, temporary or permanent settlements) that have affected a large number of citizens. Roughly 2 million people, the majority of which headed into countries in south Europe, have been the agents of a migratory event over the last 17 years. The internationalisation of the education system brought about the departure of young professionals, namely in the computer sector. As shown by the first works on online diasporas,²⁵ migrating researchers and engineers are at the origin of the phenomena that placed diasporic groups on the Web. These networks of highly qualified individuals (based outside their country in search of a place for expressing their original identity) used their technical and scientific competencies as well as their global dispersion to set-up shop on the Web. Often, by departing from a simple project to create a lucrative business model, their sites have become genuine catalysts and incubators for Romanian diasporas. We see the shift from Web 1.0 to Web 2.0 within the Romanian community as a work in progress in the relatively new context in which Romania is part of the European Union, or even as a way of building Europe from the bottom up.

The Moroccan community

In the Moroccan community, we are facing one of the most complex and advanced migratory systems in the world. In terms of a global migration map, Morocco is in many ways to Europe what Mexico is to the United States. Like in Mexico, the Moroccan State understood

²⁵ NEDELCEU M., *Vers une nouvelle culture du lien : les e-pratiques locales et transnationales des migrants roumains hautement qualifiés* in NEDELCEU M. (ed.), *La mobilité internationale des compétences. Situations récentes, approches nouvelles*, Paris : L'Harmattan, 2004, pp. 77-103. <http://www.ticm.msh-paris.fr/spip.php?article45>

the stakes of migratory resources and has set up administrative policies adapted to the connected migrant. This has translated into implementing services devoted to creating various types of media and channels for transferring money and information. Today, having electronic administration methods for migrants is just as interesting for host countries as it is for home countries. The receiving countries are studying these technologies and their uses in the hope of devising a tool for integration and control as well as for fighting against the globalization of migratory flows. Aware of the economic benefits offered by transnational communities, home countries are striving to increase their geopolitical influence, and accumulate social and financial capital coming from their populations scattered across the world. Stuck between two (or more) administrative systems and between two or more cultures, Moroccan migrants, in order to survive and circulate in a world of economic disequilibria, are turning to the Web, a place where national borders fall away. These migrants appear to be developing innovative bonding/bridging dynamics in which the State becomes a highly involved regulatory actor. These transformations (that have not yet been studied in-depth) have appeared in territories equipped for various types of fluxes and are generating a new way of looking at the integration of IEMs. The question regarding the modalities of the shift from Web 1.0 to Web 2.0 in the Moroccan community is decisive insofar as the catalyzing role played by the home State and more generally by the institutions and hierarchical organizations seeking to promote strong ties to the home country still relies upon the Web 1.0 as an adequate outlet for expression. Yet, the emergence of Web 2.0 is a guarantee for more changes and transformations to come.

One focus of our analysis will be the actual differences between the two selected communities in terms of border crossing. While Romanians can now circulate freely in Europe, Moroccans can not cross European borders at will. For the latter, Web 2.0 could be a way of reconfiguring sometimes impossible exchanges and of finding new contacts in the host country, which could, in fact, translate into mutations in terms of audiences. Indeed, individuals are no longer considered an audience based on their number, but have now become initiators of interactions and generators of networks.

Geographical area studied

Our primary focus for this study is migrants from the two selected communities living in Europe, but we shall also consider non-migrants insofar as the issue of relationships to the home country and its citizens is one of the major questions in the shift from Web 1.0 to Web 2.0. For the same reason, although this time formulated in an integration perspective, we will also pay attention to the citizens of host countries.

We will briefly look also at extra-European migrants insofar as the Europe/rest of the world distinction can be interpreted as purely artificial. In terms of connectivity and social networks, it may indeed be impossible to isolate an exclusively European network when, for example, extra-European members directly participate in structuring an online community in such a way that removing them from it could lead to a collapse of the network. In fact, it is for comparative or differential purposes that considering migrants outside of Europe may be needed.

Principles and tools for the exploration of the Web

A Web information system

The present study, which is part of a much broader project, essentially only entails a methodical exploration of the Web, followed by field work and data collection on concrete uses, and the indexing of Web 2.0 resources for migrants. From the technical standpoint, our work is based on a Web information system that enables monitoring virtual spaces of migrations using various methods and tools in order to understand the structure of these areas by analyzing them and conceptualizing them via cartography. This system includes three components: extraction (data collection), indexing (and storage), and data processing (information analysis). The data collected is interpreted during each step of the process, possibly reorienting the project as needed.

Combining these three components into a single system is crucial for building a corpus based on a mass of heterogeneous and dynamic Web data. The highly debated notion of document on the Web and the importance of a hypertext environment for available resources call for such using an approach centred on the user/expert. Therefore, our expertise on migration is used throughout the entire process of data collection and processing. Our goal is to explore the Web from the inside in order grasp its social density as well as the online social activities of migrants.

Exploratory and analytical tools

The research used a series of tools developed in the framework of our research program under General Public License:²⁶

- *Navicrawler*: This is a plug-in for the Firefox browser. It collects hypertext data on navigation. It also enables classifying/ordering visited Web sites by assigning them labels and by utilizing heuristic methods for extracting target data on a Web page. It is therefore a tool for building an expert corpus on given topics. This corpus covers Web territories that have both structural and hypertext properties. *Navicrawler* hence enables us to create a database of sites and the hyperlinks between them.
- *Timmy*: This is a plug-in for Firefox. It is a system for storing and indexing in real time. For each page visited by a user, the tool associates the most relevant keywords on that page with that page. *Timmy* hence enables extracting the main topics for a corpus from any given site.
- *Graphiltre*: This is a tool for viewing graphs. It does not function in real-time, but rather uses files in graph format produced by the two previous plug-ins. What could be seen as one possible limitation is that *Graphiltre* can not be used locally. However, its strongpoint is that it enables simultaneously viewing massive amounts of data and offers several viewing options. Particular attention is paid to the look of maps/graphs produced. This ensures their visibility and facilitates understanding.
- *Flem*: This is also a Firefox plug-in. Though not technically impressive, it is highly useful. It enables downloading URL files that can be presented (manually or at a given speed) and viewed as a slide show. Combined with *Navicrawler*, it enables performing a series of extraction operations (of targeted data) on a set of pages.

²⁶ With the exception of *Graphiltre*, all these tools are available at: <http://www.web-mining.fr/technologies>

In this study we used *Navicrawler* and *Flem* extensively for exploring and extracting data (hyperlinks and targeted heuristic data), and we only used Timmy to guide our exploration and as an informal source of hypotheses. It has not been used as a full-blown analytical instrument yet, for instance for correlating textual and hypertext data.

As for *Graphiltre*, we have only put it to limited use because at this point we were not aiming at visualizing complex graphs (in terms of the number of nodes and of links) or producing printable maps. Our carefully built corpuses were of limited scope (under 100 resources) and graphs were primarily used as analytical supports. This is why we most often used another open-source tool that we did not develop ourselves, *Guess*. This is a tool for viewing and analyzing graphs and networks that processes files in gdf format enabling diverse operations; data associated with nodes and arcs can be viewed differentially (colour, size, style) or based on a selection of nodes.

We did not run the classic tools for graphic analysis, such as *Ucinet*, because it is not appropriate for our expert-based approach, which calls on his/her interpretation during the entire corpus building process (and hence graphs as well). Moreover, this tool does not enable retrospective analysis of data already compiled.

We also used an application developed at the *Telecom ParisTech* school that enables extracting from a *YouTube* video a set of linked videos as well as various data about these videos (length of time spent on site, number of views, etc.). Similarly, we have used a crawler from the French National Audiovisual Institute (INA) that is configured to operate on *MySpace*. It enabled us to extract friend networks as well as sets of personal data about each profile (see below for more details).

Finally, we developed a series of Perl scripts that enable us to parse and process various heuristic data (e.g. for reconstituting graphs of friends).

Field of investigation and methodology

Our field of investigation primarily includes Web 2.0 technologies and Social Computing practices. And, given the subject of our research, we also focussed on some Web 1.0 resources. Now, it is time to develop case by case the methods used in each of our study areas (here, the areas will be defined simply as the use of one category of Social Computing applications, or a given platform, by a given community according to specific problematics or topics). We should also point out that the scope of these areas is intentionally very variable. In effect, we wanted to cover a broad spectrum, from the global to the local level study. The sequence below reflects such progressive narrowing of the perspective.

- 1) *Web 1.0 of migrants*: an overview of Web 1.0 and its uses by Romanian and Moroccan migrant communities. The goal was to study a few particularly significant migrant sites (from the point of view of the audience, of the offline activities, of the site creators) to present an overview of the collective organization principles in place, the main topics of interaction, and the supports and integration strategies being used. This panorama required manual examinations of sites without using exploratory or analytical tools. We also have a case study dedicated to traditional diaspora website, namely *thebans.com*.²⁷ It was created by a Romanian couple living in Toronto. The

²⁷ NEDELCEU M., *Vers une nouvelle culture du lien : les e-pratiques locales et transnationales des migrants roumains hautement qualifiés*, op. cit.

site has become a “diary-resource on the recent migration of Romanians into Canada.”²⁸ We also examined a few hybrid (Web 1.0 - 2.0) sites, associations or their members to find out if adopting other technological paradigms will require adopting other paradigms on uses. We then paid particular attention to this question by looking at a hypothetical shift to Web 2.0 within the Afro-Caribbean community, a shift that is even more significant given that this community was a major user of Web 1.0 (portals, forums). In fact, this community used Web 1.0 as a structuring force organized around few authority websites playing the role of ‘homeplace’, of centres of interaction elected by the community. In this shift, we were likely to see resistance to Web 2.0 and/or superimposition with Web 1.0. We used a purely manual technique to explore the sites found on the Web map of the Afro-Caribbean community present on the internet. This preliminary exploration’s goal was to help us draw conclusions regarding the integration modalities in the host country put forward by Web 1.0 migrant sites, which were centralized and service oriented. We will see that it is a model of integration from the top, which is very different from the integration from the bottom model, which we also call ‘the address book integration model’ (Dana Diminescu). The address book is shared by friends and acquaintances in the host country: “for a migrant, sharing the address book of ‘my French friend’, using his bank account to receive pay cheques, buying a mobile phone with his help are as much evidence of hospitality as steps towards integration.”²⁹

- 2) *Migrants in the Moroccan blogosphere*: this section seeks to explain the role, in terms of place occupied within a network, of migrants in the structuring and dynamics of the Moroccan blogosphere (the *Blogoma*) and to compare the reticular community that emerges through blogging practices with the diasporic community reflected by Web 1.0. We wanted to understand the extent to which Social Computing practices are likely to contribute to the regeneration of the community by creating links between dispersed migrants, but also links between migrants and their home country. Put differently, we wanted to assess to what extent Social Computing practices contribute to increasing bonding social capital. The question regarding the audience of these migrant blogs compared to that of diasporic sites was also very important. As our entry point for exploration, we looked at the blog of a Moroccan in Paris (whom we also interviewed). This blog is very popular on the Moroccan blogosphere and received several awards at the 2008 Moroccan Blog Awards. From there, we continued our exploration with the help of Navicrawler in order to build our corpus and to generate the graph on hypertext relationships between the selected blogs. We then associated with each of these blogs metadata on the blogger’s origin, his country of residence, and the language used. Using Graphiltre, we then generated several network graphs enabling us to visualize the breakdown of various metadata values. The prime goal was to correlate physical geography and virtual geography to understand various hybridization types. Lastly, we manually examined the content of a few prominent nodes from our graph that corresponded to migrant and non-migrant blogs.

- 3) *Second generation immigrants on the Skyblog platform*: here, we tried to weigh conclusions drawn from the previous study against the observations made on

²⁸ Ibid.

²⁹ Cf. DIMINESCU D. «Le migrant connecté», op. cit.; DIMINESCU, D. (2002), « La desinstitutionalisation de l’hospitalité et l’intégration par le bas», in Ville, Ecole, Intégration, Enjeux n. 131 décembre 2002, pp : 167-175

adolescent and young adult populations (children of Moroccan immigrants) with a socio-economic profile and stories very different from those of migrants from the Blogoma. Most of Skyblog users were young executives or students in major universities. Our hypothesis was that in this case relational activity had little to do with communitarian criteria (ethnicity and home country) and that geographic and social proximity would rather play a greater role in virtual relationships giving rise to daily interactions. Using the Skyblog search engine, we looked for blogs containing the words Morocco or Moroccan and then selected five individuals of Moroccan origin living in different cities but in the same *département* (Seine-Saint-Denis) in order to bring the geographical criteria into the picture. Then using heuristics compiled by Navicrawler, we extracted the friends from the blogroll on the home page (and only these names since we only wanted a list of the best friends). This also included some friends of friends. We then parsed the heuristic file in order to generate an ego-centred graph for each of the selected blogs. After viewing the graphs, we then selected a few prominent nodes and examined them in detail. We should also specify that this methodology was applied only once and for comparative purposes to Romanian migrants on Skyblog.

- 4) *Migrant Moroccan musicians on the MySpace platform*: the issue here was to understand if and how exposing one's production on a social network can help migrant musicians (and artists in general) gain recognition and increase mobility (concert tours, for example). The question was to find out if being present on these networks (without borders) could translate into professional opportunities for migrants. The hypothesis was that Web 2.0 generates transformations in the ways actors define themselves and their career projects and that this can generate mobility opportunities. For this, we selected four musician profiles by using various queries on the MySpace search engine with keywords like Morocco and music. Using the INA crawler, we then extracted from each profile the best friends and then their own best friends. For each of the network profiles, the crawler automatically gathered various data, including 'Country'. This is highly useful information, although rather ambiguous, insofar as in a migrant population we can never assume that it means the home country or the host country. In some cases the dual affiliation was explicitly indicated. We viewed the ego-centred graphs and analyzed prominent nodes for two of them. Lastly, we used an interview with one of the artists we were able to extract from the network.
- 5) *The Romanian blogosphere... and beyond*: here we wanted to find whether the shift from Web 1.0 to Web 2.0 translates into a transformation of corridor types between home countries and host countries. The hypothesis was that while in Web 1.0 corridors were primarily built out of a set of services and integration supports, with the apparition of Web 2.0 there was a multiplication of corridors developed around individual networks based on various interests, hobbies etc. This also seems to give a new meaning to the notion of collective living. This could also translate into economic opportunities and thereby create other types of integration from the bottom. In this sense, the area of creative arts and especially embroidery looked paradigmatic. The entry point for our exploration was a collective blog of Romanian citizens, familiar with embroidery and scattered throughout the European territory. The blog included a map on the home page that indicated the location of each of them (it should be noted that a majority of these blogs were hosted on the *Blogger* platform). We used Navicrawler to retrace the network graph. With each of the blogs collected (the

network also contained some Web 1.0 sites), we manually associated the home country and the host country. In doing so, we discovered that far from obeying the boundaries of ethnic or national communities, the creative arts domain was everywhere on Web 2.0 and implicated a multitude of very different communities. In expanding this observation to arts in general, we noted that, well beyond metaphor, the analogy between Social Computing practices and art work could be an essential key for interpreting Web 2.0.

- 6) *Parody of the image of the Romanian migrant who succeeds abroad on the YouTube platform*: the goal of this research was to study the mutations in the relationships between home countries and host countries using a series of videos created by both migrant and non-migrant Romanians that parody traditional representations of success abroad (buying a luxury car, for example). All these videos were created around a common theme. They are based on one original video (where titles like “Taran in Spania,” “Peasant in Spain” were reused in the following videos - roughly 85 videos) whose diffusion on Romanian television created quite a buzz. In addition to the transformations mentioned above, it also seems that the shift into Web 2.0 is offering a plethora of new possibilities regarding self presentation. We selected the original video on *YouTube* and then automatically extracted the associated videos using the *Telecom ParisTech* tool. We then selected videos whose titles corresponded to our topic. For each of these videos, we automatically extracted specific information (profile name of the person who published the video, the video title, number of times viewed). We then manually extracted other information (tags) and created a graph of videos-actors-tags containing two types of actor-video and video-tag links. In addition, we analyzed the content of five of these videos.

Technical notes on a few Web 2.0 platforms

As we mentioned several Social Computing platforms, we give here a brief overview of each of them.

- *Skyblog*: is a web platform developed by the *Telefun* company for the French radio station *Skyrock*. It enables creating and managing blogs free of charge. Due to the simplicity of using its blog management interface, *Skyblog* has been largely successful in the Francophone world, especially among adolescents and young adults. It is admitted, or supposed, that blogging practices on *Skyblog* primarily fall under the continuous conversation category (see State of the Art section): these practices can not be dissociated from daily offline interactions in the family or among friends. These clans often reproduce themselves on the web to continue their interactions in a different framework.
- *MySpace*: is an online social network founded in 2003 in the United States. Members have an individual webpage on which they can publish personal information, put their musical creations online, create and enlarge a friends list, receive comments and messages from other users of the platform. As of October 2005, MySpace was the fourth most visited site in the world. In late January 2008, the site had nearly 222 million members. Its success is largely due to the fact that musicians use it for presenting their creations and as a communication aid.
- *YouTube*: is a video hosting platform created in 2005 by former PayPal employees. In 2006, it was acquired by Google. YouTube lets users view, download, and publish video sequences: film excerpts, music clips, etc., but also amateur videos. Videos can be viewed by anyone, but it is necessary to be a registered member in order to publish

videos. In addition to letting members communicate between one another, it also lets users subscribe to videos published by a given member. In this sense, it is a veritable social network.

- *Blogger*: is not a platform but rather a blog publishing system (one of the earliest). It was founded in 1999 and was acquired by Google in 2003. Blogs created on the platform can be hosted on the Blogspot site, but also on any other user designated server. Hence, we are not in the presence of a closed network associated with a platform. On the contrary, each blog is an independent site that can interact in diverse ways with other sites.

Data on research coverage

We shall conclude this methodological section by presenting some data on each of the studies previously mentioned. Before doing so, we must specify that our task was to build an expert corpus adequate for understanding migrant practices on the blogosphere, and therefore we did not concentrate on collecting exhaustive data. That said it is still possible to use our crawlers to expand the corpus by automatically collecting all, or at least a large majority of migrant blogs for the two selected communities. This would however require much additional work to sort out the collected resources. In the table below, whenever percentages are very approximate, we added a question mark (?).

<i>Study</i>	N. of entry points	N. of extracted items	N. of analyzed items	% of migrant produced items out of all extracted resources from IEM	% of non-migrant produced items (from home country)	% of items produced by citizens of host country or countries other than home country
Web 1.0 web sites	34	/	34	100	0	0
Moroccan blogosphere	1	67	7	49	49	2
Skyblog case	5	1300	35	60(?)	10(?)	30(?)
MySpace case	4	1600	12	?	?	?
Romanian blogosphere	3	200	10	10	10	80
YouTube case	1	85	10	40(?)	60(?)	0(?)

III. Research Data and Findings

Web 1.0 working for diasporas

Here, we will review the criteria used for defining a diaspora formulated by the authors previously cited. We will then look at how these criteria can be applied to the Web.

Diasporas are communities of expatriate minorities who have been scattered from a common centre into peripheral spaces. They maintain an active relationship to the home country (memory of the homeland, desire to return, etc.) and develop forms of highly organized group solidarity (through associations, political parties, or other collaborative frameworks, etc.).

In the case of Moroccans, we started with the Yabiladi site (www.yabiladi.com), which is probably the Web 1.0 site that was the most successful among Moroccan communities living abroad.

Nourishing and mediating memories of the home country and the intent to return



Yabiladi (means “my country”) is managed by volunteers. This is how the site’s founder, Mohammed Ezzouak, defines it:

“Yabiladi.com is a portal built by and for Moroccans living abroad. It is a place for exchanges, information sharing, and entertainment for all Moroccans, but especially those living abroad. The goal is to provide comprehensive media for a community that is thirsty for information, images, and sounds from the home country.”

(<http://www.itmaroc.com/internet/entretien-avec-mohamed-ezzouak-fondateur-yabiladi-com.html>)

As is generally the case in Web 1.0, Yabiladi is an information portal. Most of the time, this information covers Moroccan culture and society. The site has its own radio station, photos, and videos. It is devoted to the migrant community and its prime goal is to help maintain this community’s link to their home country, Morocco.

In another interview (<http://www.afrik.com/article4437.html>), M. Ezzouak wrote:

“Most first or second generations Moroccans living abroad (MLA) dream of one day returning to Morocco to work or invest.”

Creating a platform for information and services

The site's audience mainly includes MLAs from many world regions. However, movement is not one-way: many Moroccans living in Morocco visit the site, either to better know their countrymen abroad or to help them prepare for moving abroad.

Yabiladi provides practical information for migrants: the site publishes addresses of Moroccan consulates abroad, religious services (audio library of the Koran's Surahs), postings on real-estate, mutual aid and employment, a currency convertor, a listing of Moroccan first names, advertisements on services for communicating with the home country.

Le Saint Coran				
No.	Nom de la sourate	Langue	Nb Ayats	
1	Al-Fatiha	FR ES AR MA AL PH	7	
2	Al-Baqara	FR ES AR MA AL PH	286	
3	Al-Imran	FR ES AR MA AL PH	200	
4	An-Nisaa	FR ES AR MA AL PH	176	
5	Al-Maidah	FR ES AR MA AL PH	120	
6	Al-An'am	FR ES AR MA AL PH	165	
7	Al-A'raf	FR ES AR MA AL PH	206	
8	Al-Anfal	FR ES AR MA AL PH	75	
9	At-Tauba	FR ES AR MA AL PH	129	
10	Yunus	FR ES AR MA AL PH	109	
11	Hud	FR ES AR MA AL PH	123	
12	Yusuf	FR ES AR MA AL PH	111	
13	Ar-Ra'd	FR ES AR MA AL PH	43	
14	Ibrahim	FR ES AR MA AL PH	52	
15	Al-Hijr	FR ES AR MA AL PH	99	
16	An-Nahl	FR ES AR MA AL PH	128	
17	Al-Isra	FR ES AR MA AL PH	111	
18	Al-Kahf	FR ES AR MA AL PH	110	
19	Maryam	FR ES AR MA AL PH	98	
20	Ta-ha	FR ES AR MA AL PH	135	
21	Al-Anbiya	FR ES AR MA AL PH	112	
22	Al-Hajj	FR ES AR MA AL PH	78	
23	Al-Muminun	FR ES AR MA AL PH	118	
24	An-Nur	FR ES AR MA AL PH	64	
25	Al-Furqan	FR ES AR MA AL PH	77	
26	Ash-Shu'ara	FR ES AR MA AL PH	227	
27	An-Naml	FR ES AR MA AL PH	93	
28	Al-Qasas	FR ES AR MA AL PH	88	
29	Al-Ankabut	FR ES AR MA AL PH	69	

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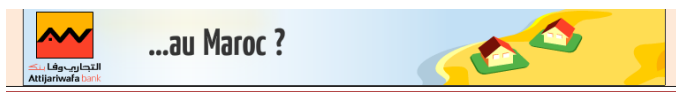
CLIQUEZ

Ezzouak writes:

"The purpose of our site is to help MLAs, but also future MLAs. For this, we provide information useful for planning a move abroad (information Moroccan students need in order to study in France, for example)."

Community life and organization

It is by analyzing the discussion forum that we can assess community life, the site's audience, and then identify the main exchange topics around which the community's online activity revolves: News & Media, Practical Living, Family, Well-being, Religion, Community & Mutual Aid, Recreation & Entertainment. As of 5 May 2008, there were 122,736 discussions and 2,222,416 messages on the forum. The most popular themes were: love and romance, administrative formalities, Moroccan news, and family life.



Action: • S'authentifier • Inscription			
Principal	Discussions	Messages	Dernier message
Général Options: RSS	17455	353344	Aujourd'hui, 15:38:49
Culture, traditions & Histoire Options: RSS	39	1762	Aujourd'hui, 14:11:30
Morocco # English board Options: RSS	1332	11541	Aujourd'hui, 14:45:28
Marruecos # Foro en español Options: RSS	220	1833	Aujourd'hui, 12:13:37
Actualités & média	Discussions	Messages	Dernier message
Actualités Marocaines Options: RSS	11387	161024	Aujourd'hui, 15:40:06
Actualités internationales Options: RSS	5723	68423	Aujourd'hui, 13:23:19
TV, ciné, vidéos, people Options: RSS	1835	31098	Aujourd'hui, 14:53:00
Vie pratique	Discussions	Messages	Dernier message
Aide & astuces Options: RSS	4454	42025	Aujourd'hui, 15:38:12
Voyages & vacances Options: RSS	3395	44260	Aujourd'hui, 14:33:31
Informatique & multimédia Options: RSS	1011	10045	Aujourd'hui, 14:49:04
Formalités administratives Options: RSS	6962	95590	Aujourd'hui, 15:27:02
Famille	Discussions	Messages	Dernier message
Vie de famille Options: RSS	3668	110316	Aujourd'hui, 15:40:25

Yabiladi presents itself as a unique home place for the scattered community (in which non-migrants can also participate) and as a tool for structuring this community. It is a common space that is a go-between building bridges, exchanges, and links. It is only in this context that we can understand the nature of forum interactions on the Yabiladi site. As stated by Ezzouak:

“Our objective is to unite all Moroccans on Yabiladi.com. The net has given us a powerful way to meet (virtually), forge contacts, learn, stay informed, or even just have fun...” (<http://www.afrik.com/article4437.html>)

In spite of this declared openness, we did notice that the site is particularly geared towards the France-Morocco axis. Moreover, while the primary goal of the services is not integration or political participation, or even promoting offline interactions, this site does depict the configurations of diasporas through its organization, hierarchy, omnipresent references to the home country (which created the site's success and its audience), and its catalyzing role in consolidating a scattered community.

We could even hypothesize that the goal of this Web 1.0 structure is not to recreate online an organization that already existed offline, but to force a scattered community to organize itself, to come together as a diaspora that takes the shape of what the website itself and its moderators produce.

A site dedicated to integration

To illustrate how Romanian migrants make sue of Web 1.0, we selected 3 sites, one in Canada and three in Europe (Italy and Spain).

We started with a site called *theBans.com*. It was created by a Romanian couple in Toronto who are computer scientists.³⁰ The site's content on diasporas makes it extremely relevant for our study (in fact, as we shall see, the site fulfils all the criteria for being a diaspora put forward by theoreticians), despite the fact that it is more oriented towards a young diaspora (obviously, Jewish or Greek diasporas are centuries old).

Initially, the authors talked about their migration experience and their Canadian insertion. But later a forum was created and the site gradually became a living testimony on Romanian migrations to Canada and an important resource for migrants. *theBans* therefore gives greater visibility to a scattered community and structures this community around a common ethnicity and a shared migration and integration experience. It also gives future migrants the chance to pre-accommodate to the host country.³¹

The site serves as a medium for complex identity building characterized by multi-affiliations in which the home country reference is essential. Nedelcu wrote: "Affiliation with the Romanian culture is as decisive as are the exchanges and the website structure themselves. Mobilizing resources can indeed be done by rethinking the notion of Nation."³² In addition, the site presents itself as a purveyor of services and information aimed at migrant integration from the top (institutional): obtaining a social insurance number, opening a bank account, getting a driver's license, finding a home, writing a résumé, etc. Here again, the discussion forum is where community activities originate and are organized.

It is hence a question of giving new life to the community within the host country, of ensuring it has a solid and hierarchical structure, and giving it an institutional existence by organizing activities both online and offline. In 2001, a Romanian school was created in Toronto after a user proposed the idea on the site. The school originally had 150 students and offered courses in Romanian language, history, and religion.

This is another example of how the Web 1.0 structure can help organize a scattered community according to a diasporic model. However, there is one key difference with the Moroccan example: for the Romanians, this structure went beyond the Web and gave rise to offline interactions in both Canada and Romania. Lastly, the site heavily focused on providing integration support. Accordingly, it provides more information on migrant life in Canada than on the home country, Romania.

What is surprising is that this site – which is so well structured and a prime example of an online diaspora and which was so well suited for a community seeking to organize itself around a diasporic model – ended up becoming the website of a traditional computer consulting company. This brings us to the issue of the life-cycle and the future of these diasporic sites, which raises another question: to what extent are migrant communities attached to this type of website?

³⁰ For the following paragraphs, see NEDELUCU M., *Vers une nouvelle culture du lien : les e-pratiques locales et transnationales des migrants roumains hautement qualifiés* op. cit.

³¹ Ibid.

³² ANDERSON, B., *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, Rev. ed, London, Verso, 1991.

Web 1.0 and the anti-diaspora

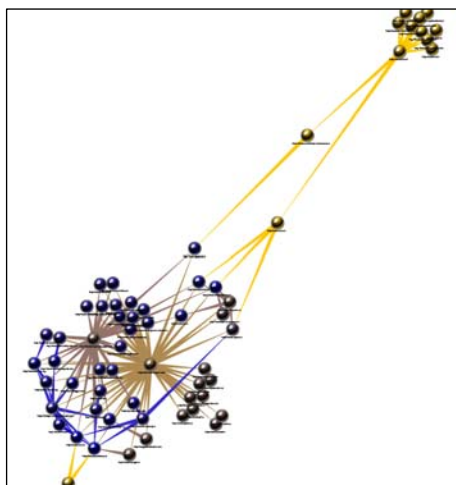
When Romania joined the European Union, there were two countries – Italy and Spain – which had a high Romanian population.

For our study, we relied on two sites of migrant Romanian communities from each of these two countries. We examined: www.fratia.it, the website of a Romanian-Italian association on culture and society located in Turin (25,000 Romanians live in Turin and 45,000 in the whole Piedmont region); and <http://dialog-european.blogspot.com/>, the website of a Spanish-Romanian association for European dialogue based in Madrid.

While the Fratia site is a window onto an association with a physical headquarters, it presents a wealth of information online (news and articles) and is highly indicative of a unique approach to integrating scattered communities; the association states that it wants its website to “be a reference and meeting point for all Romanians living in Turin who have no immediate support.” While it does promote being there for others and listening, it also offers services: administrative and legal assistance, research work, medical assistance. Here, we are in the presence of highly organized structures that strive towards migrant integration from the top down.



However, if we analyze the connectivity graphs on Fratia, we see that this site has a configuration that can be called anti-diasporic. It only links to official institutions (embassies, town halls, consulates, presidential palace, etc). In viewing the site, it becomes clear that this association acts more like an embassy than an association for a dispersed community. Put differently, the site does not embody or convey a sense of community life.



This graph shows clearly the polarization of nodes coming out of Fratia website which links mostly towards official institutions

The fact that Fratia can not be seen as a diasporic site becomes even clearer when we examine its audience. From its creation in 2002 until early May 2008, the site was visited 59,143 times (or roughly 40 times fewer visits than the number of comments posted on Yabiladi). This association has not succeeded, at least not on the web, in creating links with the existing Romanian community or in structuring itself as a place for exchanges, or as an initiator of interactions. This raises a multi-faceted question: what are the necessary conditions that a site seeking to become a diasporic node must fulfil in order for it to be utilized by a migrant community?

Similar conclusions were drawn after examining the site of the Spanish-Romanian association for European dialogue (<http://dialog-european.blogspot.com/>). This association's ambition is to "improve the way Romania is perceived by the outside world by fostering cultural exchange, or organizing conferences and festivals." Beyond providing information about Romanian cultural events in Spain, the site is also highly focused on integration (and the related issues) of Romanians in Spain, diplomatic relations between Romania and Spain, or the Romanian State's immigration policies.



It is relevant to point out that from a technical standpoint this could be considered a Web 2.0 application: a blog. However, this is not entirely the case. Here, information is published in a traditional online publishing format. It is managed by the association and hence does not fall under a logic of interactions (regardless of whether or not they revolve around an existing diaspora or a transnational community), but rather a logic of registration and institutional representativeness. It is not surprising then that among its external links, the site does not link to other blogs as is common practice in the blogosphere, but rather to the site of the Romanian government, the Romanian president's website, the Roman embassy's website, etc. Nor is it surprising that articles published have no commentaries. Again, on this type of website, we are not in the community logic.

Conclusion

While in Web 2.0, community models originate from individuals (each individual belonging to a network) who create links and generate networks, it is entirely different for the sites we explored above where meetings fall under the framework of an organization (although these websites could result from the initiative of one or several individuals, not all the members of the community participate in the network building) that presides over the community and which determines, at least in part, the modalities around which the community is structured. Regardless of their success (in terms of audience), these sites appear as catalysers, or nodes acting upon dispersed populations, as well as integration supports.

The question we come to now is: how do Web 2.0 and Social Computing practices reproduce or elongate these diasporic arrangements? Are they not transforming or even doing away with them in favour of individual forms of networking free from any institutional or

associative framework? If this is the case, can we uncover types of resistance or reticence towards Web 2.0 or Social Computing?

Afro-Caribbean community – Web 2.0 working for Web 1.0

Considering Web 2.0 as a techno-logical paradigm means seeing it as a technical/development paradigm and a logical paradigm in terms of discourse and especially the practices and uses that accompany these techniques (social computing). It is hence possible that in some cases, the Web 2.0 technique is still hung up in a Web 1.0 logic, which renders the shift from Web 1.0 to Web 2.0 more complex. We will see this process at work in the case of the Afro-Caribbean online community.



As we have already stated, the Afro-Caribbean community is highly structured on Web 1.0 with many portals and forums. In that sense, this community has tended to organize itself as a diaspora. That said, it was not unaffected by the apparition of Web 2.0, and consequently we want to understand the modes of assimilation, re-routing, resistance or inertia or even paradigm superimposition adopted by this community in order to shed light on one possible evolutionary model.³³

Yet, we can already affirm that the shift from Web 1.0 to Web 2.0 within the Afro-Caribbean community – in the sense that the latter replaced the former – has not occurred. Nor can we really say there has been a superimposition of two paradigms of practice. It would be more accurate to say that some Web 2.0 applications are being rooted in structures and practices that belong to Web 1.0.

First of all, we must mention social networks and the relationship between profile and relational activity. There are numerous Afro-Caribbean sites that let users become members and create profiles. However, these user profiles remain very basic (name, age, profession, etc), and really contain just the minimum information required for joining a forum. Even when more personal information is requested or when the user can have a private space (www.ananzie.net; www.noulove.com; www.netmassif.com), there remains a clear distinction between profile definition and relational activity: it is not the profile page itself that is the exchange interface or a support for friendly relations. These types of profiles contain no friends, and relations are forged through forums, e-mails, by searching for other members, etc. This rooting in Web 1.0 structures becomes even more apparent when there is genuine integration of Web 2.0 applications, such as blogs. Indeed, if we omit sites using the blog

³³ For our analyses, we examined about 30 websites used by the Afro-Caribbean community (presented on a map of the Afro-Caribbean web) by only looking at Web 2.0 functionalities, not the actual content of interactions.

format but which still impose editorial lines typical of Web 1.0, what we see on other sites like www.grioo.com, www.netmassif.com, www.alka13.com or www.djgwada.com – which all let their members create personal blogs – is that what makes blogging popular and inserts them within Social Computing (mixture between publication practices and communication) is completely lacking. In this case, blogs are traditional publishing systems with one singularity: they are geared towards individual use. In effect, it is surprising to note that on these blogs, the sections for posting links to friend blogs are almost always empty. As for the articles, they rarely have comments. Here again, this data can be interpreted in terms of audience. We posit that blogging practices have very little success among these communities, which supports the hypothesis that Web 2.0 is being met with a certain resistance or maybe inertia.³⁴ Indeed, we must also point out the huge gaps these sites have in terms of the number of forum participants (often over 12,000) and the number of blogs created (always under 1,000, and many of them are not updated regularly).

However, while in the blogosphere the absence of connectivity coupled with the absence of commentaries almost always means that the blog is not maintained, this is certainly not the case here. Indeed, in this case the absence of any social networking activity does not mean there is no community. The fact that several blogs are grouped under a common mother site, under a platform that plays the role of catalyser – which on its own creates the relation – is what ensures a priori that people participate in the community (even though it can be reshaped through various interactions between individuals), and ensures that unity is constructed around shared interests rather than the individuals themselves. In this sense, we are still in the presence of a phenomenon where the use of Web 2.0 applications is still stuck in a Web 1.0 logic that corresponds to diasporic expression and organization.

The fact that the community model in play here is based on a distinction between providers of information and services on the one hand, and public interaction on the other (even if in some respects forums are a counter-balance; but we can not forget that all forums require moderators) is illustrated by the example of *WebRadio* and *WebTV* offered by the Afro-Caribbean sites (www.radiotropicale.fr, www.westindiesradio.net, www.wouepa.com,³⁵ etc.). In effect, site editors create the site's editorial line, and hence decide what multimedia content is published for users to view. We noted, however, that Web 2.0 applications are simultaneously present on different platforms, namely through the option of inserting *YouTube* or *DailyMotion* videos (which are really just links to these external platforms). We are not yet in a framework where users publish their own content, but one where users create links to external Web 2.0 platforms. It is therefore the mobility of Web 2.0 contents that allows them to be inserted into Web 1.0 structures.

In fact, we can observe this subtle intrusion of Web 2.0 on several sites of the Afro-Caribbean community. Users of the www.ananzie.com site are given a system for creating and sharing photo albums. As for <http://FWIyapin.fr>, it is indeed a collective blog that follows a classic editorial line, but it still constitutes a genuine network of bloggers: for instance, the site automatically displays the most recent visitors as well as links to their blogs. There is even a

³⁴ Only interviews with the actors of the online afro-Caribbean community could allow us to decide whether we are witnessing proper forms of resistance (low adoption of Web 2.0 reflecting conscious, deliberate decisions) or rather of forms of inertia. In this case, we could expect, if not mutations, gradual changes of habits. Moreover, we have to note that it is more demanding to publish regularly on a blog or to manage a profile on a SNS than to participate to a forum. Also, resistance and inertia can work together as in cases of 'passive resistance'. Finally, the very technical competences of the webmasters of sites mentioned here could be another factor slowing down the integration of Web 2.0 functionality and platforms.

³⁵ Website last viewed in 2008

counter-example to what we have posited thus far: www.tropicalspace.fr. Created in 2006, this site gives users the option of creating a detailed profile that can include a blog (the system used is almost identical to MySpace). Users can also build friend networks, share photos, videos, party planners, etc. A large part of the collective and social material is hence present on the platform, but we must point out that its audience is much smaller (in terms of members registered on the forum and profiles created) than the main sites used by the Afro-Caribbean community. This may be another indication that the shift to Web 2.0 is encountering resistance (and not inertia in this case).

So, we have seen that although we can be sure that a real shift to Web 2.0 is occurring, the ways of relating to this new Web paradigm remain quite varied. Here are a few factors affecting this relationship:

- *Resistance*: this can be seen among communities who have remained loyal to Web 1.0 in terms of uses and the applications in place (portals, forums)
- *Technical integration without changing practices*: this refers to communities that integrate Web 2.0 applications but use them in a Web 1.0 framework: this is what happens, for example, when a blog is used as a traditional publishing system, without regards to the supposed relational dimension of blogging
- *Links to external Web 2.0 platforms*: this is a widely used system that utilizes the “mobility” of Web 2.0 contents. It entails importing Web 2.0 resources onto a Web 1.0 site
- *Super-imposition of Web 1.0 and Web 2.0*: this applies to Web 1.0 sites that integrate Web 2.0 functions even if, as we have seen, there remains an unbalance with the Web 2.0 aspect, which remains very discrete.

We should specify that the various forms of the shift to Web 2.0 can be observed among other communities, like the Romanians and the Moroccans, for example.

Being able to identify the different ways of relating via Web 2.0 before any definitive shift occurs can be quite useful. But, it is also necessary to understand the reasons behind these differing attitudes. In effect, between what we have called ‘resistance’ and ‘superimposition’ there is a deep gap, which is an early sign of a trend towards one possible way of adopting Web 2.0, or one potential way the shift might play out.

Regarding these reasons, we were unable to put forward any definitive responses, but our observations did enable us to formulate a hypothesis. We can start by saying that resistance might be explained by the fact that adopting Web 2.0 presupposes questioning the role of the Web 1.0 site or portal as a catalyser and provider of a context and themes for interaction and communication as favouring a diasporic mode of community life: Web 2.0 requires revisiting, renegotiating, or reconstructing these frameworks by looking at the relational activities of dispersed individuals and at their motivations; in other words, it implies the shift to a collective mode of existence fitted to transnational networks. But more importantly, we noted that whenever a common ethnic or national affiliation is put forward, Web 2.0 infrastructure is almost inexistent whereas whenever the expression of personal identity (be it ethnic or other) or common backgrounds (meeting place for blacks living in France, sharing family photos, for example) or hobbies is given priority, the shift to Web 2.0 is much more visible. In fact, Web 2.0 is perfectly adapted to these practices in the sense that collective existence presupposed presenting the self and ones activities. To us, this seems to be an unsettling yet innovative factor in the lives of online migrant communities.

Web 2.0 as a support for transnational networks

In scanning Web 2.0, we can see that it is particularly well adapted to the transnational practices of migrants – as described by Schiller, Portes or Tarrius³⁶ - much more so than a diasporic logic (even if diaspora can be defined as one possible form of a transnational community, or essentially its most organized form). What we are seeing on the Web then is intensification and generalization of networking phenomenon that existed long before the Internet (via communication supports like the telephone, fax, etc.) where networking was reconverted into a source of cultural and economic production: utilizing ones network has always been a migratory know-how. But while the migrant's most important asset is certainly his ability to utilize mobility and connectivity to transform a relational ease into a productive and economically effective know-how, this new context presupposes that the migrant have a solid and broad knowledge of technological supports. Let us add, if necessary that we do not argue that a shift from Web 1.0 to Web 2.0 is sufficient to provoke a progressive shifting from diasporic organizations to transnational networks: this latter shifting is inscribed in a much more broad process of transnationalisation which include a diversity of other phenomena, especially relying on the migratory history of the scattered community, its members' degree of inclusion in the host country, their socioeconomic status, etc.

Migrants and the blogoma

The term 'blogoma' refers to the Moroccan blogosphere. It was created in 2004 and currently includes between 20,000 and 30,000 bloggers (five times more than in Algeria), most of which are educated and financially comfortable adolescents, students, or young urban professionals. A third of users are migrants. The split between French and Arab (for those hosted in Egypt) is clearly defined and is indicative of the divide in Moroccan society between a modern minority and a conservative majority. Younès Qassimi, co-organizer of the Morocco Blog Awards points out that the animation on a blog, and more generally its presence on the internet, is discovering talent and is a source of professional opportunities abroad. Indeed, recruiters are increasingly turning to the Internet to find out about candidates' backgrounds and activities.

Obviously, it was impossible to give an exhaustive inventory of blogs from the blogoma. We opted to use a highly restricted corpus of blogs (we have limited our exploration to 67 blogs³⁷) and to focus on in-depth analysis. However, for our analysis to have meaning, we had to start by exploring one blog at the heart of the blogoma's hypertext network. Our entry point was the blog <http://www.larbi.org>, which received the most number of awards at the Morocco Blog Awards (including best political blog). We noted this site's popularity when we first began combing through the Moroccan blogosphere.

³⁶ The definition of transnationalism as formulated by the group of anthropologists Basch, Schiller, and Szanton Blanc is: "the processes by which immigrants forge and sustain multi-stranded social relations that link together their societies of origin and settlement. We call these processes transnationalism to emphasize that many immigrants today build social fields that cross geographic, cultural and political borders, immigrants who develop and maintain multiple relationships – familial, economic, social, organizational, religious and political." BASCH L., GLICK SCHILLER N., SZANTON BLANC C., Nations Unbound, Transnational Projects, *Postcolonial Predicaments and Deterritorialized Nation-States*, Gordon and Breach, 1994, p.6.

³⁷ The only selection was the nationality of the blogger; this one had to be Moroccan, migrant or not. However, two blogs managed by individuals of European or American origin were also considered, given their very high connectivity in the Blogoma network.

We explored this blog using Navicrawler. For each blog analyzed, we only visited the homepage, collected hyperlinks (majority of which were links on the blogroll), and examined the list of blog friends. Accordingly, we overlooked the many links that are often present in the articles or comments about articles. A network study that includes these other types of links would be very relevant (so long as a clear distinction is made between the types) given that it would uncover some type of temporality or network dynamic. However, collecting links from the blogroll gives us a largely sufficient quantity of information at this stage in our study.

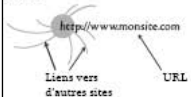
Our entry point was www.larbi.org. Its author is a Moroccan from El Jadida. He currently lives in Issy-les-Moulineaux (Parisian suburb) and is a consultant for Parisian banks. As we pointed out in the methodological section, we have tried to associate each blog from our corpus with the geographical residence of its author. We did this in order to discover the role played by migrants in the Moroccan blogosphere. In effect, the positions in the graph, the central or peripheral nature of a node can attest to a type of social capital (taken here as an individual property) within a community and strategies for increasing this capital.

This geo-location also enables us to study the dynamics in play between the different ways of expressing proximity and distance, between physical geography and cyber-geography. In no way shape or form, however, are we saying that the latter is replacing the former, but rather that it is reshaping it, transforming it, and giving new meaning to it. In the following pages, we present a series of maps based on geo-location.

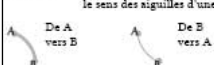
Blogoma - sélection continents

Légende

Site :



Liens : Les arcs se suivent en tournant dans le sens des aiguilles d'une montre.

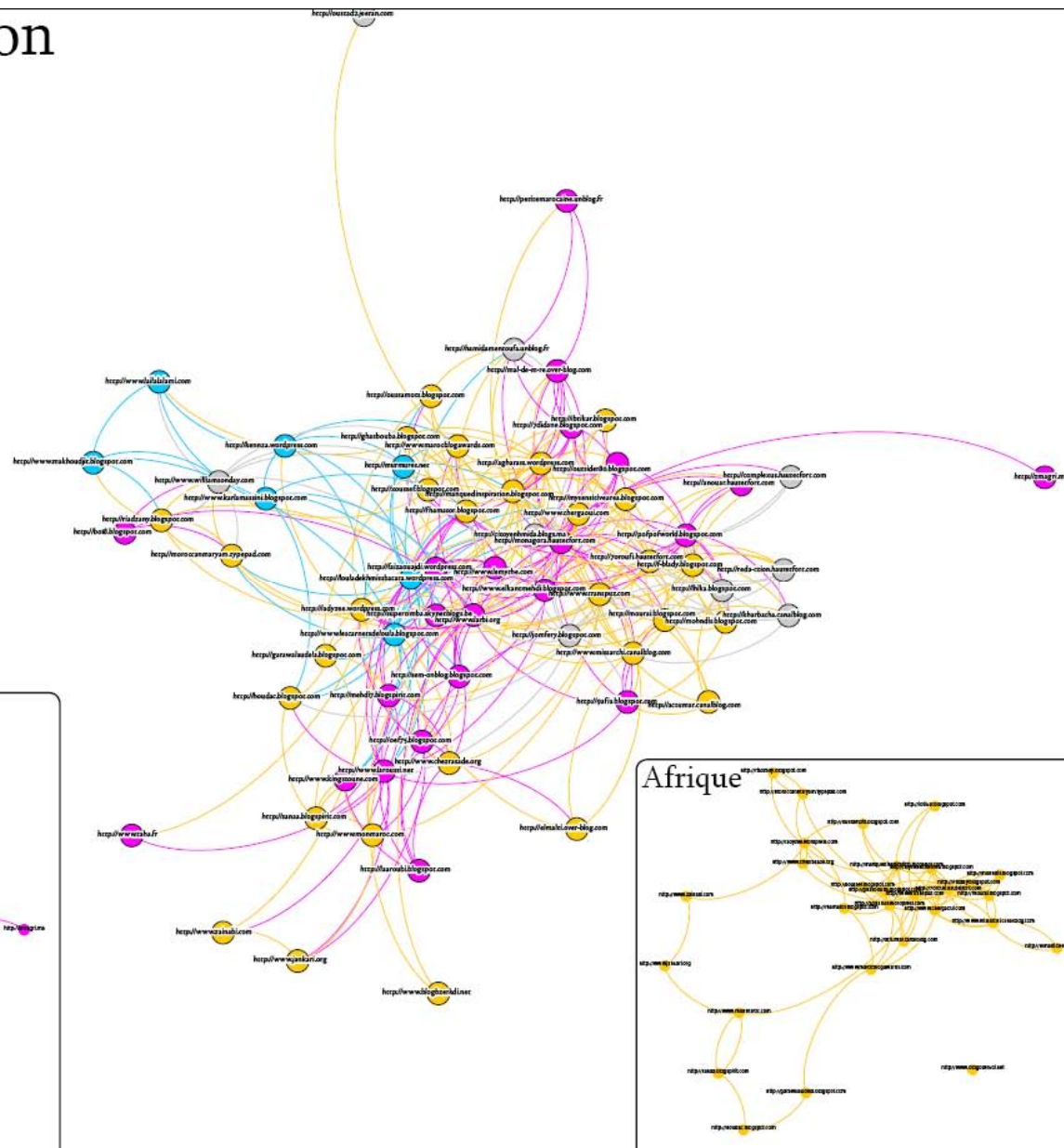
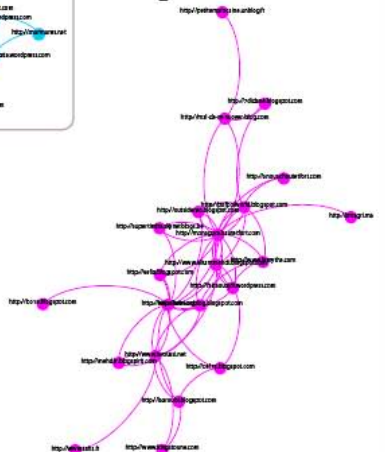


Chaque "Continent"	Couleur	Couleur (chaque)
Afrique	29.67	0
Europe	22.67	1
Amérique	7.67	2
Océanie	9.67	3

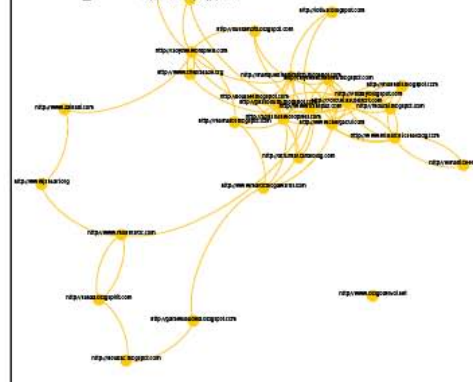
Amérique



Europe



Afrique



Map 1: Breakdown of blogs by continent

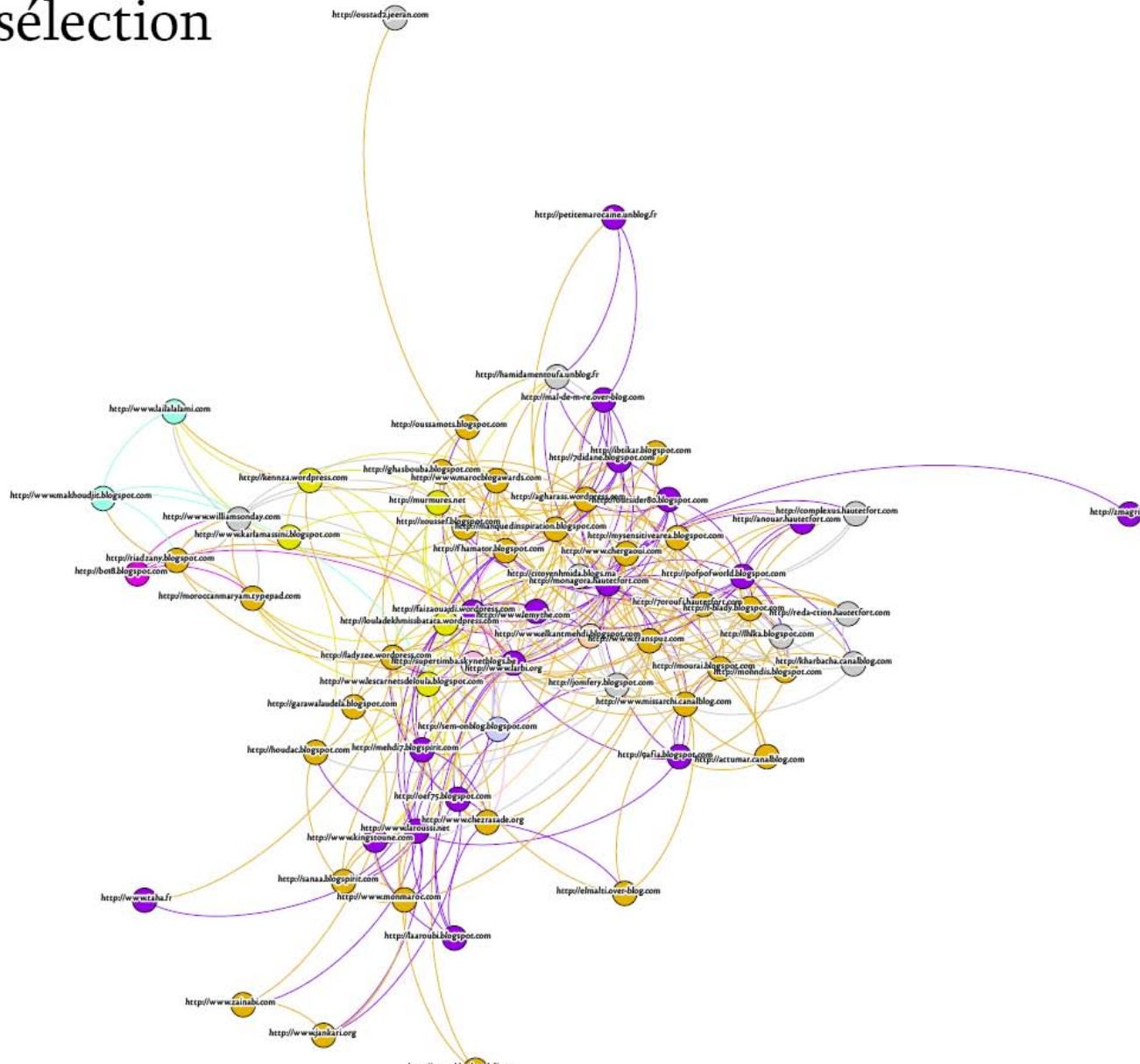
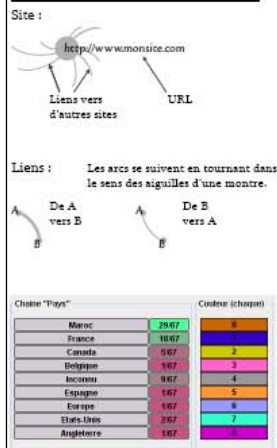
The main map associates a color with each continent represented (the nodes in grey are nodes for which we could not obtain the blogger's physical location)

The mini-maps indicate the sub-networks by continent.

This figure is only illustrative of the visualization results and how they can be interpreted. Colours are therefore important, while information on individual nodes is not significant in that respect.

Blogoma - sélection _pays

Légende



Map 2: Breakdown of blogs by country

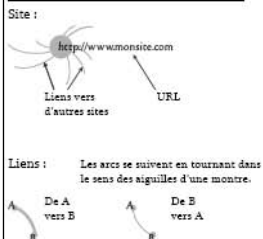
The map associates a color with each country represented in our sample (the nodes in grey indicate nodes for which we could not obtain the bloggers's physical location).

This figure is only illustrative of the visualization results and how they can be interpreted. Colours are therefore important, while information on individual nodes is not significant in that respect.

A more effective visualization is provided in the specific country visualizations for Canada, Morocco and France at next page.

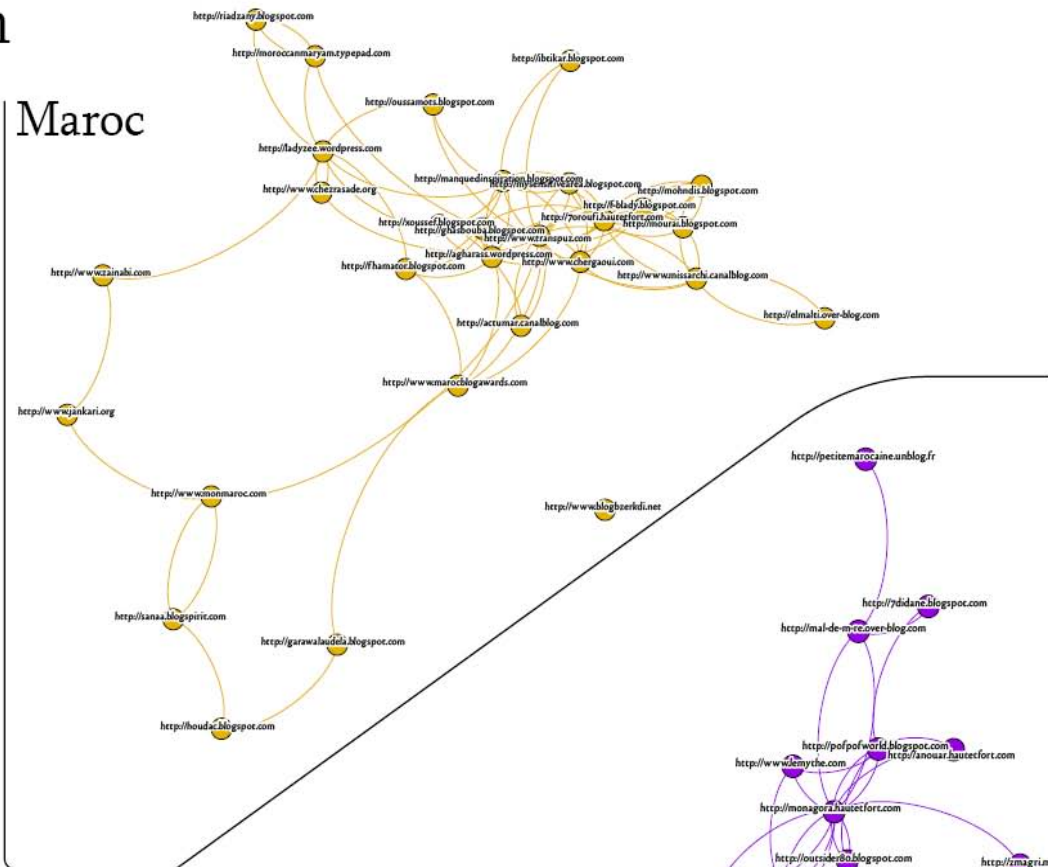
Blogoma - sélection _pays (séparés)

Légende

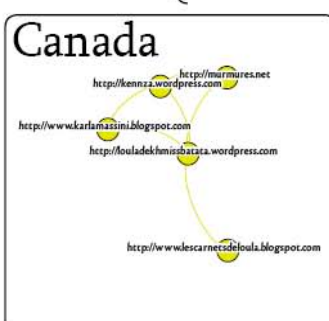


Choix "Pays"	Couleur (chaque)
Maroc	28/27
France	18/27
Canada	5/27
Espagne	3/27
Inconnu	9/27
Espagne	1/27
Etats-Unis	2/27
Angleterre	1/27

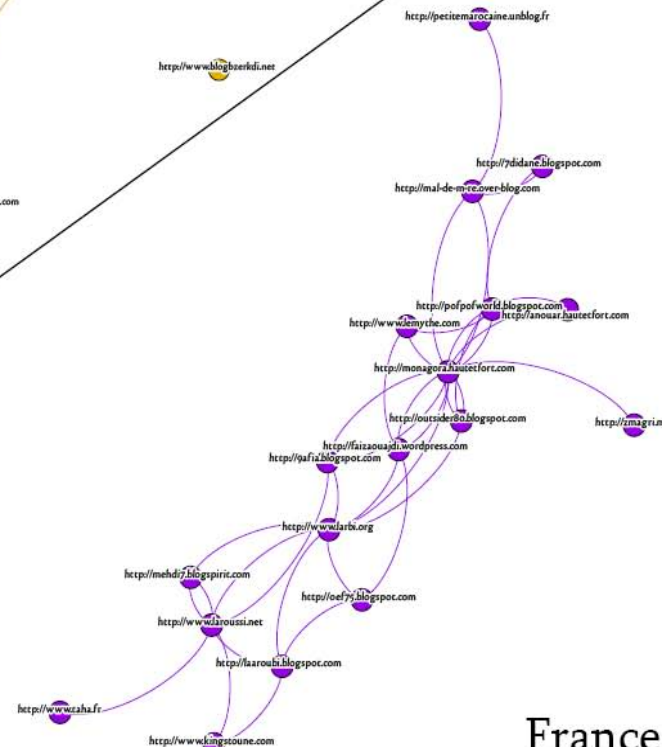
Maroc



Canada



France



Map 3: Mini-Maps of blogs by country

These three mini-maps indicate the sub-networks in the three main countries from Map 3

This figure is only illustrative of the visualization results and how they can be interpreted. Colours are therefore important, while information on individual nodes is not significant in that respect.

Let us start with a few numbers. As a reminder, our corpus contains 67 blogs. If we omit the 8 blogs for which no physical location could be obtained, we obtain the following breakdown by continent:

- Africa: 30 blogs, or 50.8%
- Europe: 21 blogs, or 35.6 %
- America: 8 blogs, or 13.6%

By country:

- Morocco: 30 blogs, or 50.8%
- France: 18 blogs, or 30.5%
- Belgium: 1 blog, or 1.7%
- Spain: 1 blog, 1.7%
- England: 1 blog, or 1.7%
- Canada: 5 blogs, or 8.5%
- United States: 3 blogs, or 5.1%

We also noted that there is an equal balance between migrants and non-migrants: 50.8% are non-migrants and 49.2% are migrants. These figures differ from what the online press indicates³⁸ for the Moroccan blogosphere (2/3 migrants and 1/3 non-migrants).³⁹

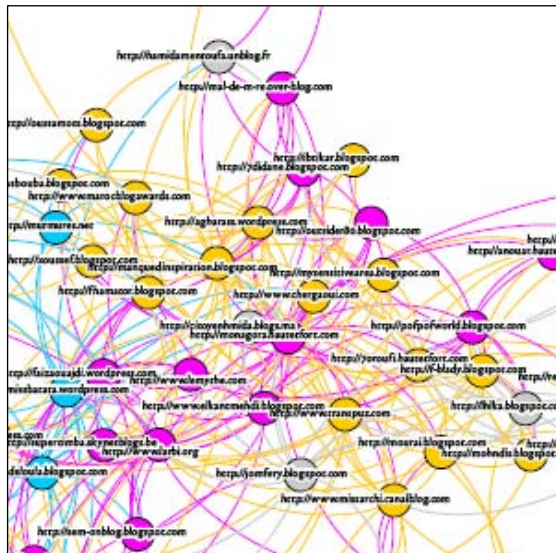
It is certain that migrant sites play a key role in the way the overall network is structured. In this respect, migrants incontestably partake in the life of the home country (its politics, economy), although in an original way. These migrants also raise questions regarding the relationships Moroccan migrants have towards the various host countries. But, we can also say that non-migrants are interested in these questions as well. In this respect, life 'down there' is an active player in life 'here'.

So what do the different maps tell us? We shall focus on representations, all while admitting that our observations are still in the metaphorical stage. We first note that non-migrants blogs appear throughout all the graphs in the centre and on the peripheries, and hence form a type of uniform interconnection. In this sense, their ubiquity gives them a primary role. However, there is an area of higher density in the centre of the graphs, which attests to a structuring role. Concerning migrant blogs in Europe (the same can be observed among migrants in France), we note a type of transversal channel, which could lead us to say that the network has a type of interiority/exteriority. In participating in it, migrants located in Europe are drawn to other networks, which are perhaps more rooted in host countries. What is interesting to note is that this multi-affiliation in no way means they are relegated to the peripheries of the blogoma.

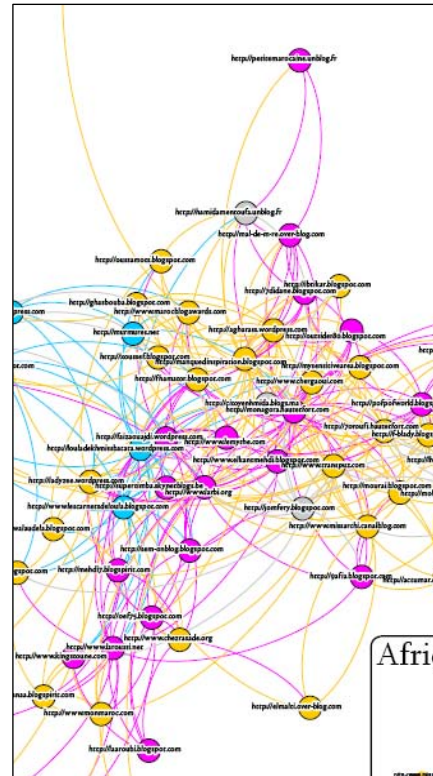
³⁸ <http://www.la-croix.com/article/index.jsp?docId=2328116&rubId=25041>: «La « blogoma » rassemble surtout adolescents, étudiants ou jeunes cadres urbains, instruits et plutôt aisés. Dont un bon tiers de Marocains de l'étranger.»

³⁹ We also note the importance of bloggers located in France (roughly one-third). One could perhaps say that this data should have been nuanced by the fact that on the one hand our entry point is a migrant and that in this respect he is perhaps more linked to migrants than the average individual on the Moroccan blogosphere, and on the other hand that he lives in France and perhaps has more contact than average with bloggers living in France. This weakness is valid, but we must remind that the largest proportion of people who visit this blog live in Morocco (50%). Nonetheless, we can also suppose that this breakdown is not entirely indicative of the network. Yet, we put ourselves inside it so as to be able to formulate the hypothesis that the core of the network, its center, containing the most popular blogs is represented by a half migrant.

Lastly, concerning migrant blogs from the American continent, we can see that their position is more peripheral, although to a lesser extent for migrants living in Canada than those living in the United States. This could be explained by the fact that the former, most of which are in Quebec, use French as a blogging language.



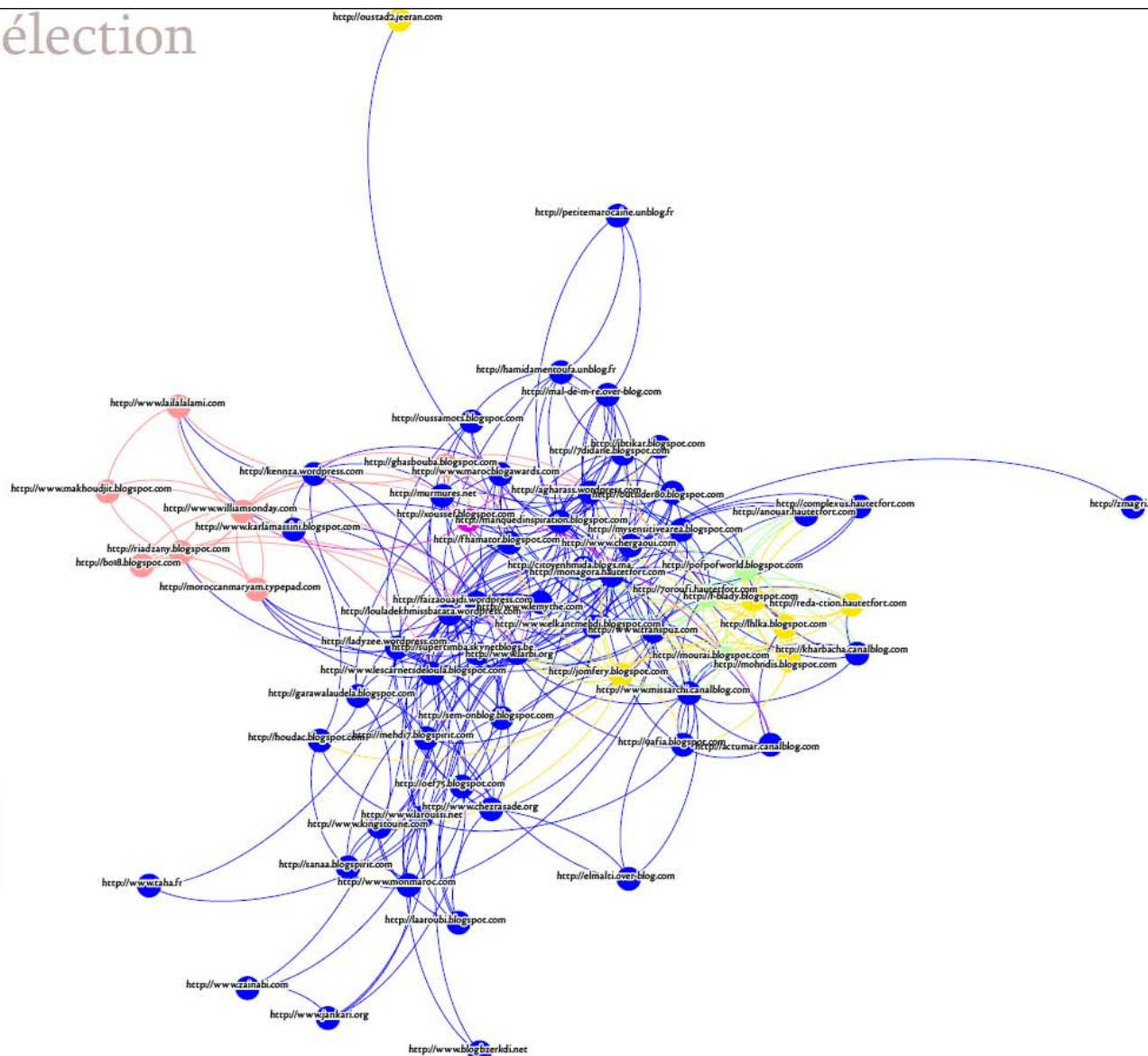
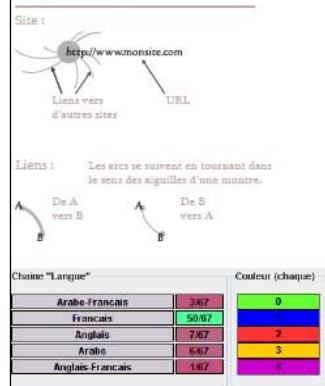
Graph centre – area highly dense in non-migrant blogs



Transversal channel of blogs of migrant Moroccans in Europe

Blogoma - sélection _langues

Légende



Languages in the Corpus: We also associated each site with the language(s) it uses.

Map 4: Breakdown of blogs according to language

This figure is only illustrative of the visualization results and how they can be interpreted. Colours are therefore important, while information on individual nodes is not significant in that respect.

We see that French is the most widely used language by far. English and Arab are peripheral (we also saw a few Arab/French blogs). The predominance of French should not be surprising because we know that the Moroccan web is largely, although not exclusively, Francophone, unlike the Egyptian web, which is Arabophone. We can, however, claim that this multilingualism certainly encourages migrants to participate in the blogoma insofar as what we called their multi-affiliation does not entail being forced to choose between home country and host country. In this sense, migrants do not have to select their audience according to the language criteria.

Although here we only have a few Anglophone blogs, we note that it constitutes a set of nodes that are tightly linked. This leads us to ask if enlarging our corpus would not put us in the presence of a genuine migrant sub-network partially dissociated from the rest of the network for linguistic reasons.

Now for the Arabic language blogs. If we accept the idea that the cleavage between a modern minority and a conservative majority (which is shown by preferring to use one language over another) is reproduced on the web, we may wonder if using a modern blog as our starting point made us overlook a whole network of conservative blogs, probably dissociated from our network and which forms an independent community. If so, it would be interesting to study the links that are forged between these two communities. Most of such links would certainly be oppositional and we would probably discover controversial topics. This again raises the question as to the reproduction/transformation of social cleavages on the web. This question, however, goes beyond the framework of the present study, but would be an interesting subject for further research.

Analysis of a few authority blogs on the network

To better understand the role played by migrants on the blogoma and how centrality in terms of position is expressed through contents and discussion topics, we shall describe the topics addressed on the blogs from our corpus that can be considered as network authorities. For this, we selected the three migrant blogs (<http://monagora.hautetfort.com>, <http://www.kingstoune.com/>, <http://laroussi.net/>) and the three non-migrant blogs (<http://mourai.blogspot.com/>, <http://fhamator.blogspot.com/>, <http://ladyzee.wordpress.com/>) that are the most cited in our corpus (we obviously exclude our entry point, which is also an *authority*). Instead of presenting all our findings, we will just give a few of our conclusions:

- 1) The self-presentation theme often takes the form of self invention in the sense that it is less a question of creating a profile or publishing intimate content dealing with shared interiorities than writing an autobiographical story where the boundary between fact and fiction becomes blurred. More specifically, these stories refer to many elements from Moroccan and French social life, and some even present themselves as being in conflict with a social milieu. Self-presentation then takes on a double meaning: exposing who one is and exposing it to...., taking risks, becoming vulnerable.
- 2) Comparing migrant and non-migrant blogs was interesting. While non-migrant blogs were focused on the daily lives of their authors in Morocco, the migrant blogs addressed a greater variety of topics, leaving less room for self-presentation, and playing upon several geographical areas simultaneously. Moreover, their practices are more closely related to blogging practices being used in the world of research (see State of the Art section)
- 3) The most important thing here is certainly that the relative gap in migrant versus non-migrant preoccupations does not translate into a separation, or a rupture in the

network. In short, we are dealing with one common community.⁴⁰ This could explain why in our graph migrant bloggers formed a type of transversal channel indicative of a certain interiority/exteriority, a type of common identity not without differences. We could conclude by saying that blogging practices enable the migrant to join a highly structured original community while still pursuing individual projects in the host country.

We can conclude that these reticular communities conceived by Web 2.0 are first and foremost communities of individuals who simultaneously maintain bonding and bridging relationships and are different from the diasporic community organized around a powerful home. What we see in the case of Web 2.0 is a multiplication of authorities.

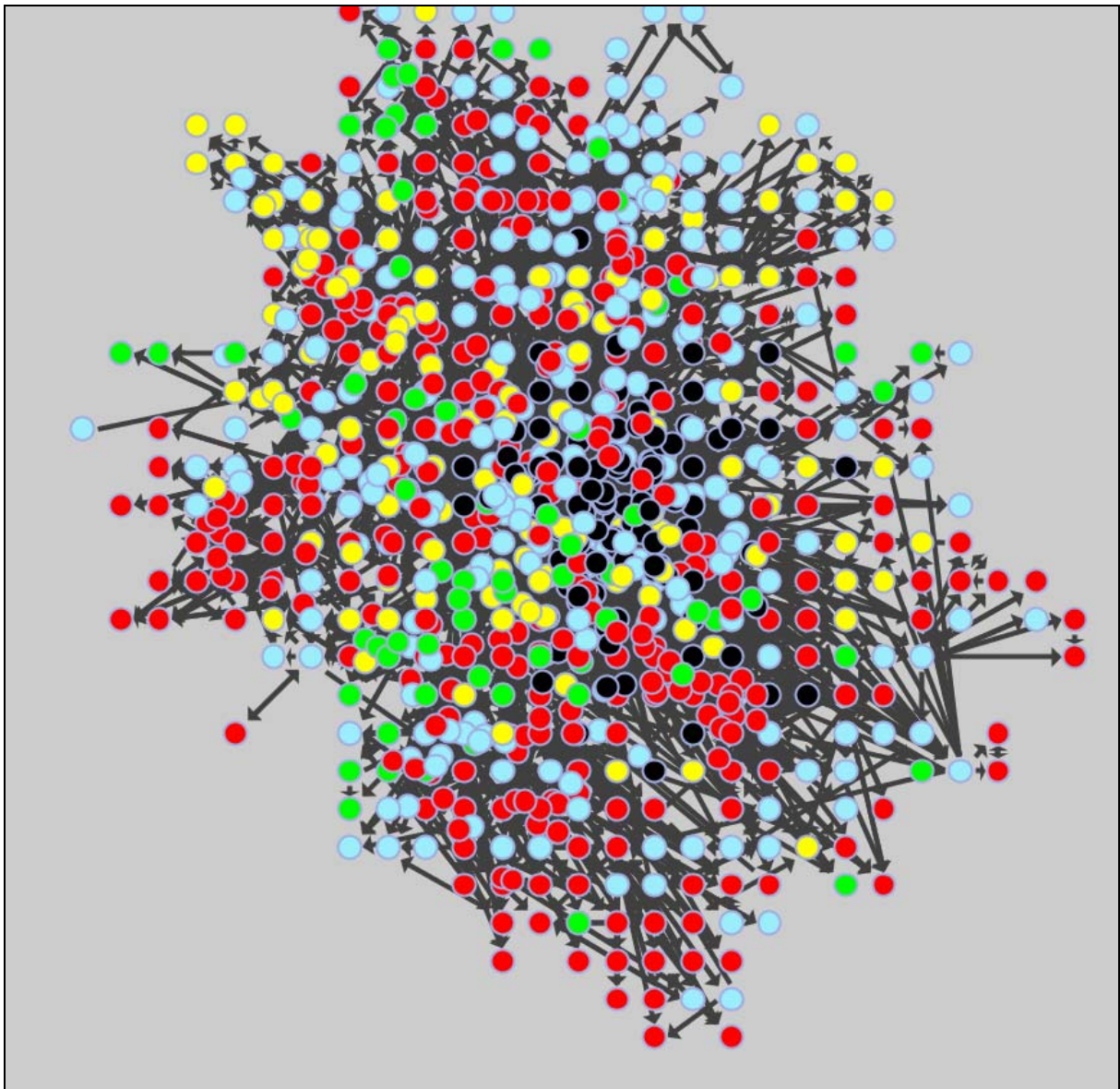
Our research hypothesis is verified according to its first aspect, that of a mutation of the forms of collective organisation in the shift from Web 1.0 to Web 2.0: indeed, there is a shift from a few catalytic entities/authorities to a multiplicity of centres of authority.

Moroccan musicians on MySpace

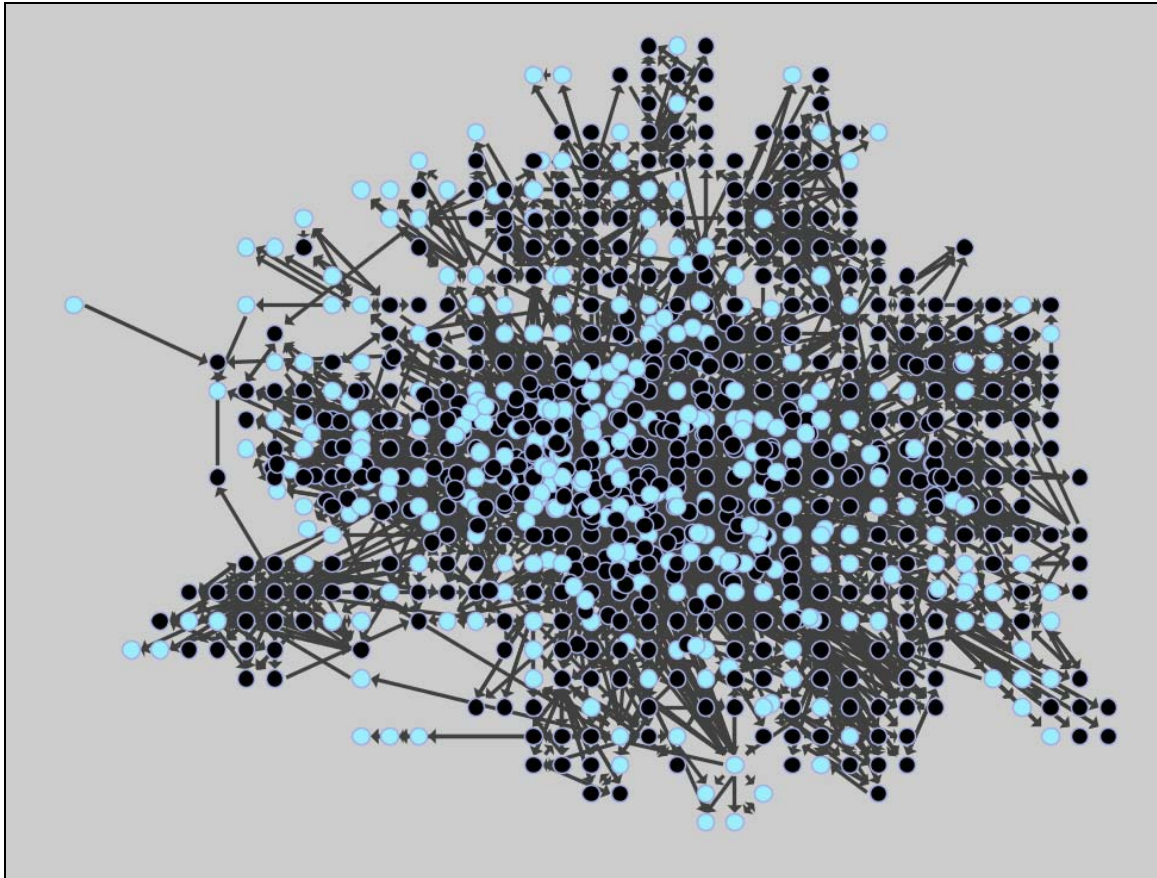
We have generated networks (ego-centred) of the best friends of four musicians on *MySpace* of Moroccan origin with a migratory background. Various profile data such as age, city, etc. is associated with each node on the graph. The goal was to understand with whom these individuals link themselves and according to what criteria. Does origin or nationality play a decisive role? Are we in the presence of bonding and/or bridging phenomenon? Does participating in this network offer professional opportunities, namely by increasing musicians' fame in the home country and the host country(ies). Can we uncover strategies for increasing this fame by, for example, being linked to a record house, concert halls, etc.?

Here we will present in detail but one of the four case-studies: the profile of a musician going by the name of Hadj Lyrrix. He has French and Moroccan citizenship and has been living in Temara in north Morocco since 2004 after spending 6 years in France in Montpellier and 3 years in Switzerland. He lives a rather mobile life and told us that he regularly travels to France to promote his music and search for producers. In addition, he claims that he closely collaborates with French musicians of various backgrounds in various French cities. He created his *MySpace* profile in 2007. He uses *MySpace* namely as a "platform for communicating with the world."

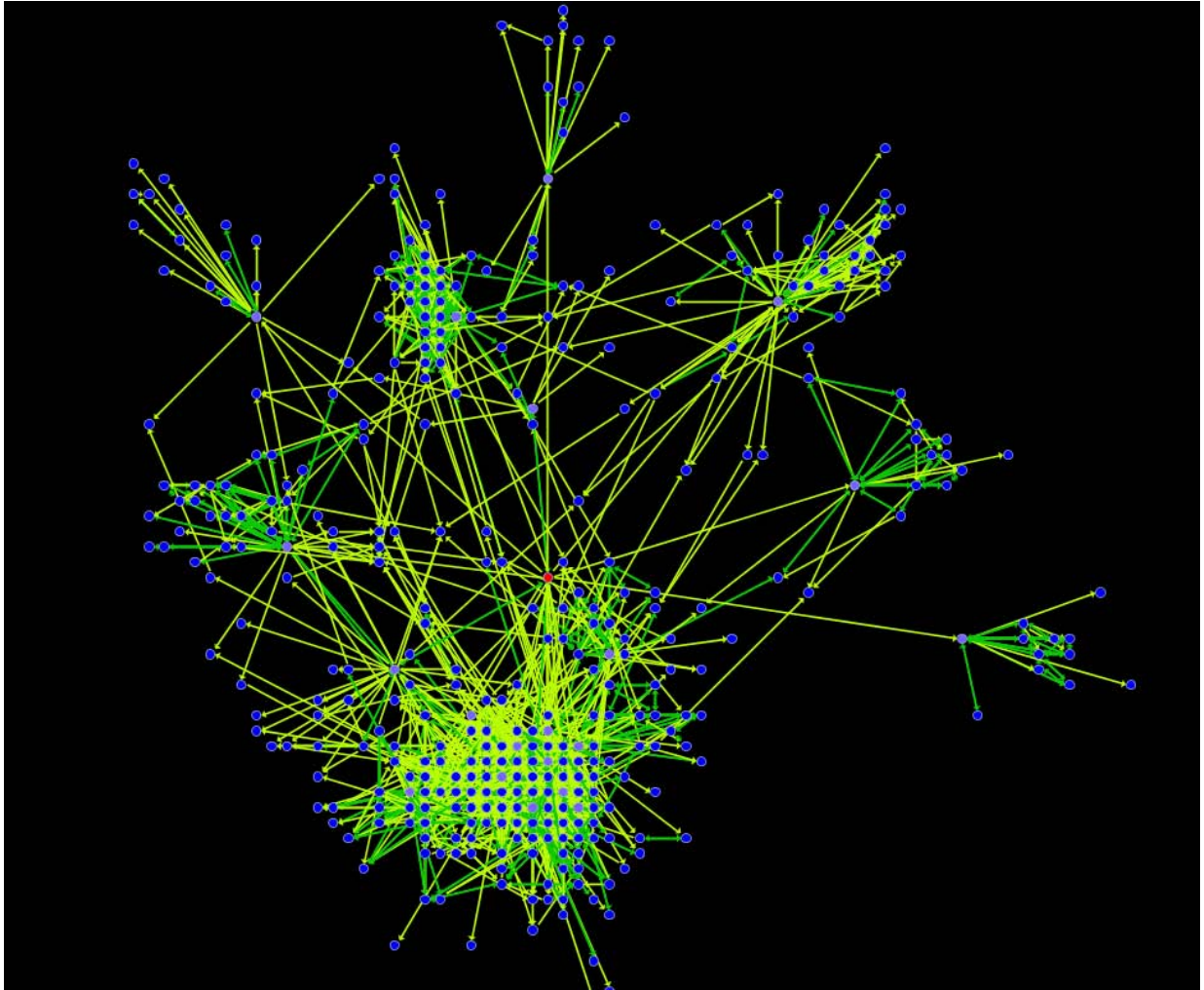
⁴⁰ One might object that our very methodology produces this result. It is not the case. Indeed, by choosing as entry point of our exploration a migrant blog, we were exposed to the possibility of collecting only migrants; or even if some rare non-migrant blogs were collected, they might have been poorly connected to the migrant blogs. Now, it was by no means possible to discern divides in the network between so-called migrant and non-migrant zones. There is properly speaking an interpenetration between migrants and non-migrants.



Map of Contacts by Country (legend – red = France; black = Morocco; yellow = United States; green = United Kingdom; blue = unknown or other)



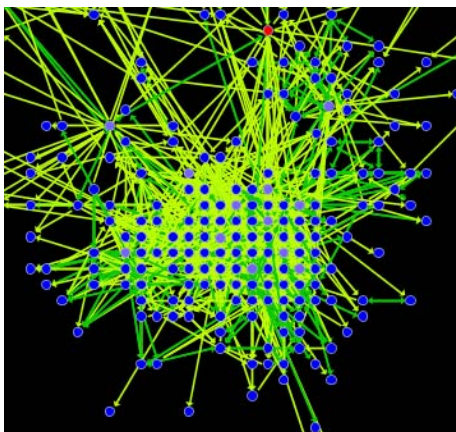
Map of Contacts (legend – black = musician; blue = non-musician)



Hadjlyrix' Friend Network (level 2 – red = entry point; grey = best friends; blue = best friends of best friends)

There are several zones of high density (one in particular) in this graph. We identified 4:

- **Set 1**



This set is by far the densest. We see a genuine meshing phenomenon. If our entry point node is off-centre, it is because it belongs to other groups clearly separated from this set, but also because it is rarely cited by nodes in this set (in fact, it only has three links in the whole graph) and occupies a peripheral position (although it cites a dozen sites from the set). Let us briefly look at the central nodes in the sets by focusing on the direct friends of our entry point.

First, we have *Iboulevardfest*:

“The Boulevard des Jeunes Musiciens” is the culminating point of action implemented throughout the year. It includes the EAC team whose goal is to scout young musicians. The Festival gives them the chance to play on stage in professional conditions. For 8 years, an alternative scene has been developing. Concerts are regularly held in the F.O.L. Hall (previously managed by EAC), or other cultural complexes. These concerts have enabled musicians to become known by their future fans, national and international media, which has also helped them gain popularity (Darga, Hoba Hoba Spirit, H-Kayne, Barry, Total Eclipse, Aba'Raz, Fnaïre, Haoussa, etc.).”

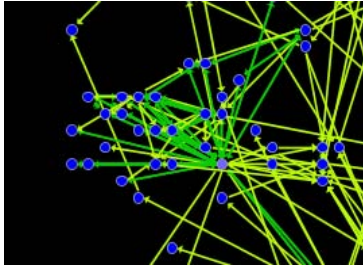
So here we have an event held in Morocco whose goal is to help young musicians get discovered by giving them the chance to perform on stage. This event is central to Morocco's alternative music scene. Its centrality on the *MySpace* network means the event continues to get attention throughout the entire year (the page has 34 links that appear on the graph) and that it maintains or structures the scene mentioned above.

Hichamurban: he has 60 incoming links (it is the only node on the graph with at least 50 incoming links). It is the personal page of a 34 year-old man living in Rabat, Morocco. The content, however, has little to do with self-presentation. The author deals with artistic projects in Morocco and manages several music groups in Morocco. He is also a hip-hop fan. He participates in the *Boulevard des Jeunes Musiciens* presented above (probably as an organizer). We can hence tell that this man is tied to the world of music promotion as well as to the task of creating fame and professional opportunities for Moroccan musicians. But what interests us the most is that his page has a marked transnational dimension. First of all, and this may appear of minor significance, his page is written in English.⁴¹ Secondly, the author indicates at the top of his page in large font “Hicham is in France from 2 to 13 April.” Lastly, he presents himself as a citizen of the world, as someone who simultaneously belongs to multiple spaces, several cultures, and many social milieus: “Moroccan born in France and working with the UK... So you can say I am ‘world citizen’.”

Djkeyma: This is the node on the graph with the second highest amount of incoming links. Djkey is an experienced and recognized DJ in Morocco where he has worked for Radio2M (radio channel of the second largest Moroccan television station). He has a company that provides graphic, web, and video services and which contains a DJ school. He moved to Casablanca in 2003 after spending some time in Agadir. There are numerous articles and images published about him on his *MySpace* page. There is also a group of *YouTube* videos that have been inserted. Djkey presents himself as an entrepreneur in the music world who works with multiple musicians. In terms of his foreign relations, he has been to several events in Holland, he has concert dates scheduled for Spain, and is tied to various initiatives of the French Meknès Institution. His fame therefore goes well beyond Morocco and probably includes some migrant populations.

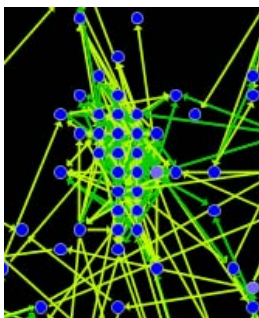
⁴¹ We should point out that in the examined friend networks of the musicians, we always came across a high number of North Americans, and to a lesser extent, English-speaking individuals. The interview with HadjLyrix confirmed what the graph suggested: that these friends live and/or are originally from Morocco, France, and the United States. We do not think this applies only to Moroccan musicians, but rather that Anglo-Saxons occupy the central position on the *MySpace* network. They are the authorities and have lots of structural power. This is why it is useful to be linked to them (of course, these hypotheses need to be validated).

- **Set 2**



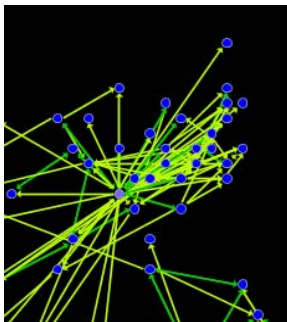
This set is smaller and much less dense. Our entry point is directly linked to only one profile from this group: *amoriamic*. Amoria is a soul/r&b group composed of two French musicians from Ile-de-France (or North African origin). The group is somewhat well known and has performed in several large Parisian concert halls.

- **Set 3**



This set is very dense but contains relatively few pages. Our entry point is linked to but one of them: *20syl* (20 incoming links). It is the page of a rap group (multi-ethnic) called *Hocus Pocus* located in Nantes. It is a rather well known group: they have recorded several albums and were nominated for the *Victoires de la Musique 2008* in the urban music category. We can hypothesize that *MySpace* pages of recognized artists (those having recorded albums) plays a structuring role on *MySpace* networks. For a lesser known artist, linking to them may be a relational strategy (although the friendly links on *MySpace* are not necessarily reciprocal). We might even discover that musicians' connectivity on *MySpace* is directly linked to the level of fame (but how could we measure this?)

- **Set 4**



Compared to set 1 and 3, this one is not very dense. Our entry point was linked to one single node: *aurorequartet* (10 incoming links). It is the page of a jazz/gypsy music group from Paris. We will simply state here that the relatively low number of incoming links can be explained by the fact that the group is less famous (in terms of the reputation of concert halls in which they perform), despite the fact that our goal is not to formulate any type of law – that would mean that building fame online follows the same patterns as what occurs offline (we do not deny that this could be the case, nor do we confirm it – it remains to be proven). It is also necessary to look at what connectivity strategies tell us (despite the fact that friend links are not always reciprocal, it is possible that there are exchanges occurring like those on the traditional web, i.e. Google's page rank system).

- **Synopsis of interview with Hadj Lyrix**

The goal of the *MySpace* page is clearly to promote the music of various artists. This user is quite active on the platform (spends 30 minutes a day on his page and searches for new friends every 2 days). His presence on the platform is designed primarily as a way of meeting other musicians, discovering other musical horizons, or opening himself to the world. Hadj Lyrix physically knows 80% of his *MySpace* friends, but only 10% of them are strong links (friends, family). The other links, the weak ones, are professional acquaintances. So we see that the platform is used less for creating links (even though 20% of his friends were

discovered on the platform) and more for maintaining weak links, which otherwise run the risk of being undone. It is quite interesting to note that when communicating with his strong links, the artist prefers to use other platforms, such as *Facebook* or *hi5* (or MSN chat). We see then that the differences between online social networks are not really based on a socio-economic background, or a social class (see State of the Art). In fact, each user defines these characteristics as he/she sees fit, and one single individual can have be present on multiple platforms with each one serving a different purpose (in our case, *MySpace* for the professional/artistic aspects, *Facebook* for personal relations. Most friends of Hadj Lyrix on MySpace live or from Morocco, France, and the United States (see note on page 5). We see on the country graph above that the majority of friends are from France (the country category on MySpace is somewhat ambiguous. For migrants, is it their home country or their host country? Do they give both of them? etc.) and that they are distributed throughout the entire graph. The Moroccan friends are less numerous but are concentrated in the centre of the graph. As for the comments, here they seem to play no strategic role in terms of connectivity and the artist is selective – the content takes precedence over relations: only comments dealing with the artist’s production are accepted. Moreover, this member sees MySpace as a potential source of international mobility. Moreover, when we asked the question, he did not hesitate one second: “That’s why you join MySpace!” (but more than simple mobility, he seems to have international fame in mind). *MySpace* is clearly seen as a way of presenting oneself, getting known, as a necessary yet not definitive way of ensuring a Web presence. It can be seen as a step leading towards fame; once this is achieved, a classic website will be set up and *MySpace* will play a less important role. In this respect, Web 2.0 is not replacing Web 1.0, but rather leads up to it: it can be seen as ‘filling its holes’. Web 2.0 enables broad communication, more visibility, but this will not replace the originality of a traditional artistic webpage. Contrary to what one might think, Hadj Lyrix thinks that *MySpace* mixes well with the classical tools of cultural industries and that it can help find a producer and a record label. In this sense, when the artist answers “No!” to the question if MySpace enables building alternative types of fame, it does not mean that the network is incapable of helping build fame, but simply that it is not doing anything differently. The MySpace method rather enhances and integrates into what already exists. Put differently, there is no profound rupture. We were unable to obtain a response to the question “Does MySpace help ensure concert dates?” Lastly, Hadj Lyrix says he uses another Web 2.0 platform: *Facebook* (he previously mentioned Hi 5). While we already saw that he used it for strong links, it is also another way of presenting his musical profile as a group (this application is currently being created).

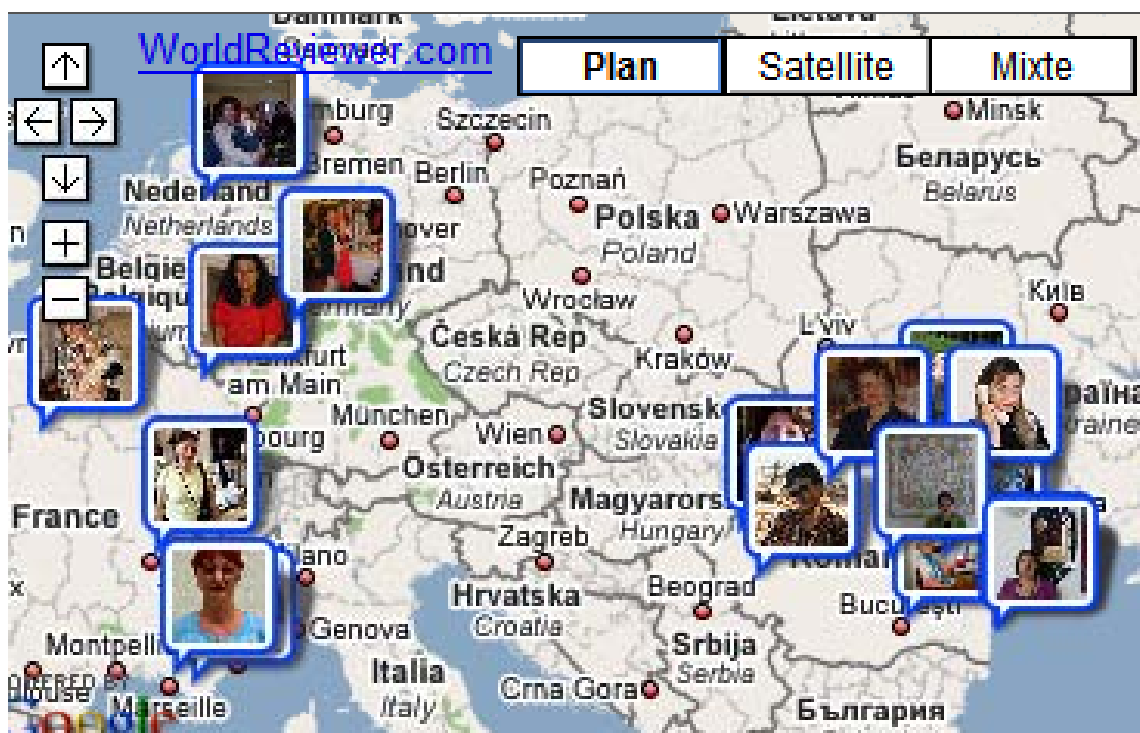
Conclusion

This analysis demonstrated how transnational networks are created and operate. It addressed their double quality of bonding and bridging, as well as the ways these networks are converted into relationships geared towards cultural and economic production. This is why self-presentation (with photos, videos, biographies) is used for presenting work or a musical piece the user wants to promote, get recognized. Once again, this is done by multiplying links to various centres of authority.

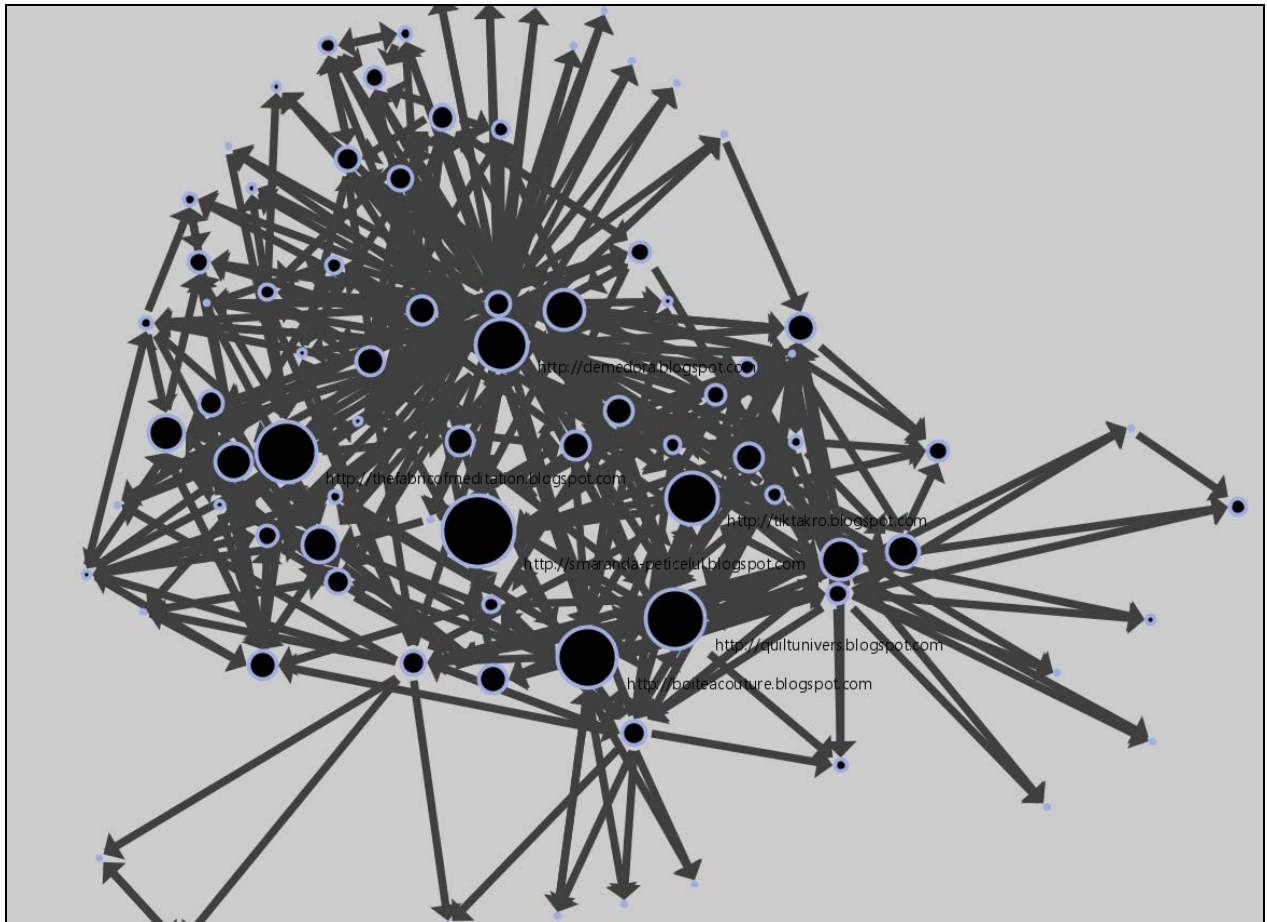
Our research hypothesis is verified, according to its second aspect, that of a mutation of the forms of economic participation: the networks are converted into relation of cultural and economic production via the professionalisation of centres of interests (here the music); this participation is not mediated anymore by diasporic organisations

The Romanian embroiderers – E-Patchwork

For the Romanian bloggers, our entry point was the collective blog of a community called *Peticelul International* (<http://www.peticelulromanesc.blogspot.com/>) that brings together Romanian women scattered throughout Europe who perform patchwork and present their works on individual blogs that are strongly linked. On this blog, we see a map of Europe that ‘geo-localizes’ members of the community: this map is an ideal representation of what transnationalism is, without even mentioning the actual theme of this community: patchwork, which is highly symbolic of weaving, linking, and networking. We should specify immediately that we are in an exceptional case here, not only regarding transnational networks, but also, as we shall see, Web 2.0.



We built a 100 blog corpus from the Peticelul blog.

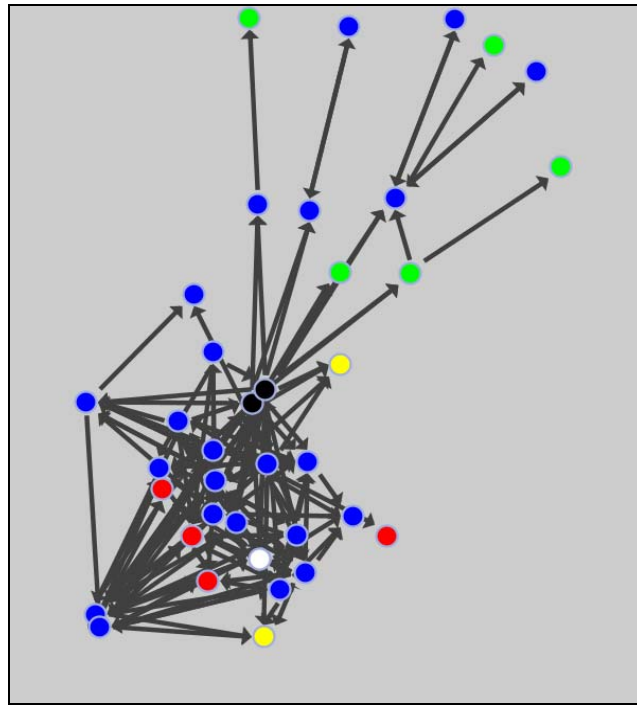


Node labels with at least 13 incoming links are displayed. There are six of them:

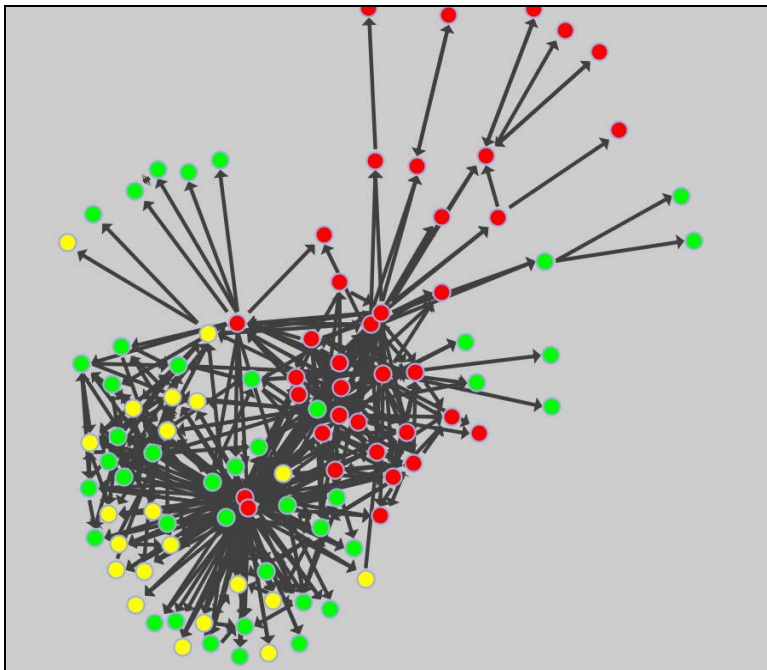
- <http://demedora.blogspot.com>
- <http://thefabricofmeditation.blogspot.com>
- <http://smaranda-peticelul.blogspot.com>
- <http://quiltunivers.blogspot.com>
- <http://boiteacouture.blogspot.com>
- <http://www.tiktakro.blogspot.com>

While these blogs correspond to the classical formats of the blogosphere in that they display, for example, a journal on the author's activities, photos etc., they are unique in that they present a genuine technical know-how about embroidery. We can add that publishing tickets is often regulated by and synchronized with traditional cultural events such as Christmas or Easter, but also with web outings (exhibitions, artisanal fairs). Such regulation and synchronization reinforce the essence of the community and its Web presence and are an example of new transnational practices.

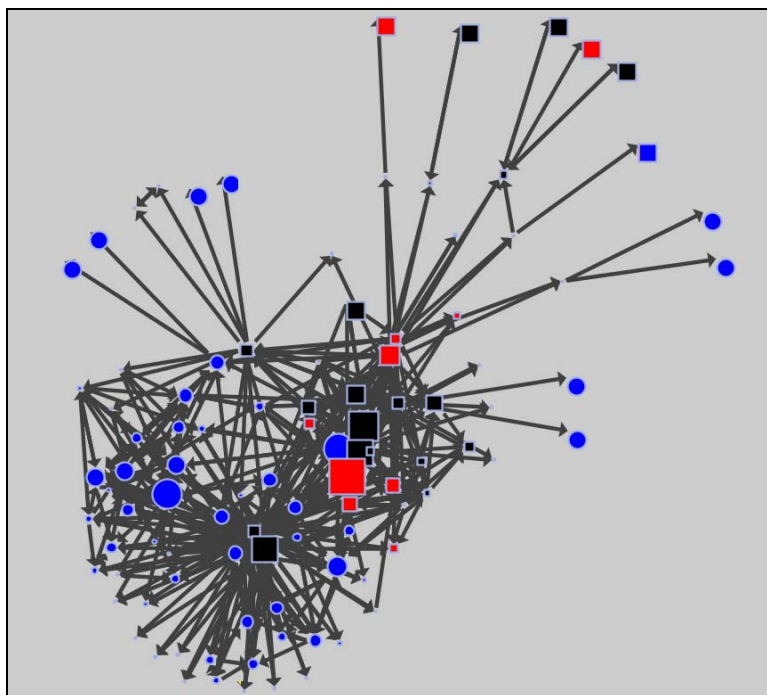
We also noted that among these six nodes, only half are blogs managed by individuals of Romanian origin, which leads us to think that the community of embroiderers goes well beyond the Romanian framework. This is demonstrated in the next map.



Map of blogs maintained by individuals of Romanian origin by place of residence: blue = Romania; red = France; green = US; yellow = Germany; white = Holland; black = other (ex: Peticelul International community).



Map by country of origin: red = Romania; green = Europe; yellow = outside Europe. In Europe, we have France, Italy, Germany, Holland, Scotland, etc. Outside of Europe, we mainly have the US, but also Canada and Australia.



This graph combines the criteria previously used. The square nodes connect to blogs of individuals of Romanian origins, which is not the case of the round nodes. The size of nodes depends on the number of incoming links. Among the square nodes, the black nodes connect to individuals living in Romania, and the round nodes connect to Romanian migrants.

Conclusion

To return to the hypothesis formulated for this study, we can conclude that it is verified in its third aspect, that of a mutation of topics of interaction and corridors. In migrant populations Web 2.0 contributes to multiplying not only centres of authority but also corridors. Numerous corridors take shape at the crossroad of presenting what we are and presenting what we do, our interests and practices. These corridors are centred on common practices in which distance, separation, or uprooting fall away and we see a new type of connected presence and understanding the concept of togetherness. Corridors take as many forms as the centres of interest shared by subset of individuals belonging to the scattered community. The diasporic corridor relying on reference to the homeland or nationality does not disappear, but it is now included in, or better articulated with, a series of new corridors.⁴²

⁴² The case of the Romanian embroiderers and the deep exploration of creative arts and artisanal work on the web lead to new questions for future research: how do the technical know-how of embroidery and web content publishing correlate? Do these know-how overlap? How does this combining art (SCHWINT D., «La routine dans le travail de l'artisan», *Ethnologie française*, XXXV, 2005, 3, pp. 521-529) that draws on two key qualities of the artisan come together? Could we not say that Web 2.0 is itself built through artisanal work: combine, regulation, and routine? We feel that this hypothesis deserves close attention.

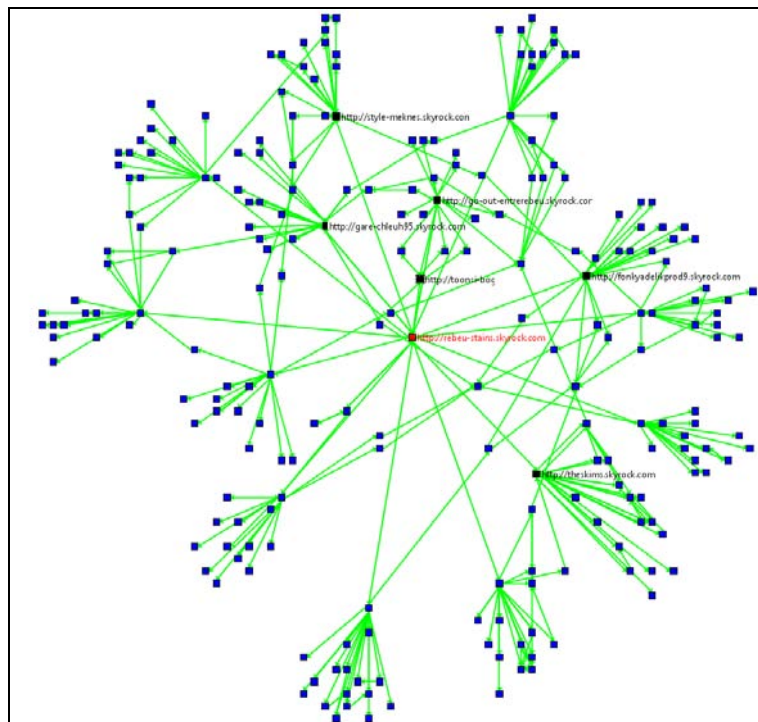
Web 2.0 beyond diasporas and transnational networks

Skyblog and self-presentation

In our case-study on Skyblog, our method consisted in meticulously selecting blogs of sons of Moroccan immigrants, tracing the networks of best friends, and then analyzing some prominent nodes from the graph.

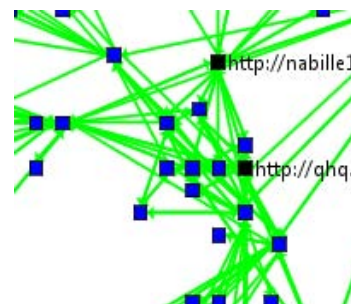
The question we asked ourselves was whether or not the ethnic or national origin played a structuring role in the formation of these networks. We also looked into the question regarding the various configurations of communities.

It is necessary to take the general properties of social networks on the Skyblog platform into account. This platform is principally used by adolescents and young adults whose blogging practices primarily fall under the continuous conversation category (see State of the Art section). In this respect, these practices most often can not be dissociated from daily offline interactions be they familial or friendly. These clans reproduce themselves on the web in order to be able to continue these interactions in other ways. This is why we can suppose that connectivity within the networks we are going to outline is less based on ethnic or national criteria than on geographic and social proximity.



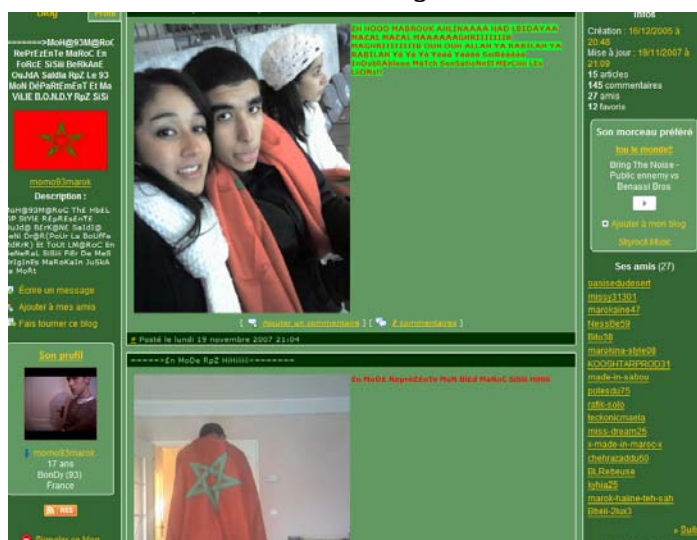
Friend network of the blogger called rebeu-stains

Our study confirmed this hypothesis: the networks that were clearly the most dense and active (if we look at the dates when the blogs were last updated) are those that promote common activities off-line. This is how we were able to observe a highly structured network of a rugby team from the town of Bobigny.



Blog networks for members of a rugby team

momo93marok's blog



However, in the least structured networks, ethnic references can play a non-negligible role. In this case, it was never used to make a collective assertion. Let us take as an example the blog: <http://go-out-entrierebeu.skyrock.com> whose objective was to form a platform for exchange and meetings between persons of North African origin. Its very low level of connectivity and the dates of its most recent update are proof that this attempt has failed.

In reality, the community reference can not be dissociated from an individual presentation or representation. This is the case for example of individuals who publish photos of themselves with national symbols (like the flag of Morocco or clothes in Moroccan colours; the blog is laid out as an interface for self affirmation by using symbols that convey collective affiliation.

What is mainly in play here is the presentation of an identity that is both personal and collective, a self-presentation as an individual and as a member of an ethnic or national community (as an example see <http://gare-chleuh95.skyrock.com/>). What we have observed is that there is a certain correlation between individuality/nationality, singularity/ethnicity (<http://momo93marok.skyrock.com/>). Sometimes community references are exhibited to such a degree that they completely overshadow any hints of individual personality although they are supposed to present an individual (<http://amine93120.skyrock.com/>). Lastly, self-presentation is often done through a hybridization of collective references: nationality is coupled with common adolescent problems (<http://tite-algerienne.skyrock.com/>), or ethnicity is linked to the suburb culture (phenomenon that we of course find off the Web), through the image of the supposed 'Algerian mafia' (<http://amine93120.skyrock.com/>, <http://titibo62000.skyrock.com/>) etc.

There is little doubt, however, that the phenomena observed fall under a logic that goes beyond the single issue of being an ethnic minority. In effect, we could think that such types of self-presentation are done by individuals who, for one reason or another, only have as a relational resource what they are: put differently, they are individuals who are not engaged in social and/or professional activities, a 'doing' that they see as a potential source of validation. This leads us to a few remarks we would like to make on the potential of Social Computing for developing the social capital of IEM. What we observed was that it was in relatively loose

networks self-presentation through communitarian references predominated whereas the more structured networks were based more directly on common interests and experiences offline (if we except the example of the rugby team, we were in the presence of rather dense networks grounded on geographical proximities revealing, undoubtedly, offline group activities). In this respect, such presentation seems to be a relatively ineffective connectivity strategy. Connectivity presupposes a common ‘doing’, which also presupposes a certain capital, be it economic, cultural, or social. We conclude therefore that while Social Computing can help develop the social capital of IEM, it can only occur when they previously have a minimum social capital derived from a professional or migratory project or interests.

Although these bloggers are caught between two cultures – French and Moroccan – we remain in the presence of adolescent forms of sociability that fall under a broader process of emancipation. We are no longer in the presence of Web 2.0 use that hinges upon configurations of diasporas or transnational communities.

YouTube and the audiovisual representations of integration

We have explored the series of parodies on the *YouTube* platform in which Romanians act in a parodist game about how success or integration abroad is represented.

The original video was posted in Spain by a Romanian of rural origin working in this country. This four-minute video, in which he presents his car as a type of successful integration in Spain, was a provocation intended for his friends back in Romania. It raised a clamour of indignation on YouTube. By 3 March 2008, we had collected 125 videos that were parodies of the original video. They were published from Romania but also from other countries with Romanian population.



*Taran in Spain*⁴³



*TARAN IN SPANIA
versiunea CHINEZA :)*⁴⁴



*taran in Spain;
Dubai style*⁴⁵



*Taran in spania (ILFOV)*⁴⁶



*taran in spania III*⁴⁷

⁴³ <http://www.youtube.com/watch?v=1QZq7vtIDP4>

⁴⁴ <http://www.youtube.com/watch?v=WxYqurW80Sw>

⁴⁵ <http://www.youtube.com/watch?v=epAxqao0L-I>

Here it is a question of self-presentation in the purest sense of the word, but this corresponds first and foremost to a series of references between home countries and host countries, between those that stay and those that leave, between those that dream and those that show. For them, it is a question of repeating in an almost festival-like fashion the traditional links between migrants and non-migrants. The new corridors that are created here are therefore like theatres, as double parodies of the migratory reality and the images it evokes.

- **Graph of videos – authors – tags**

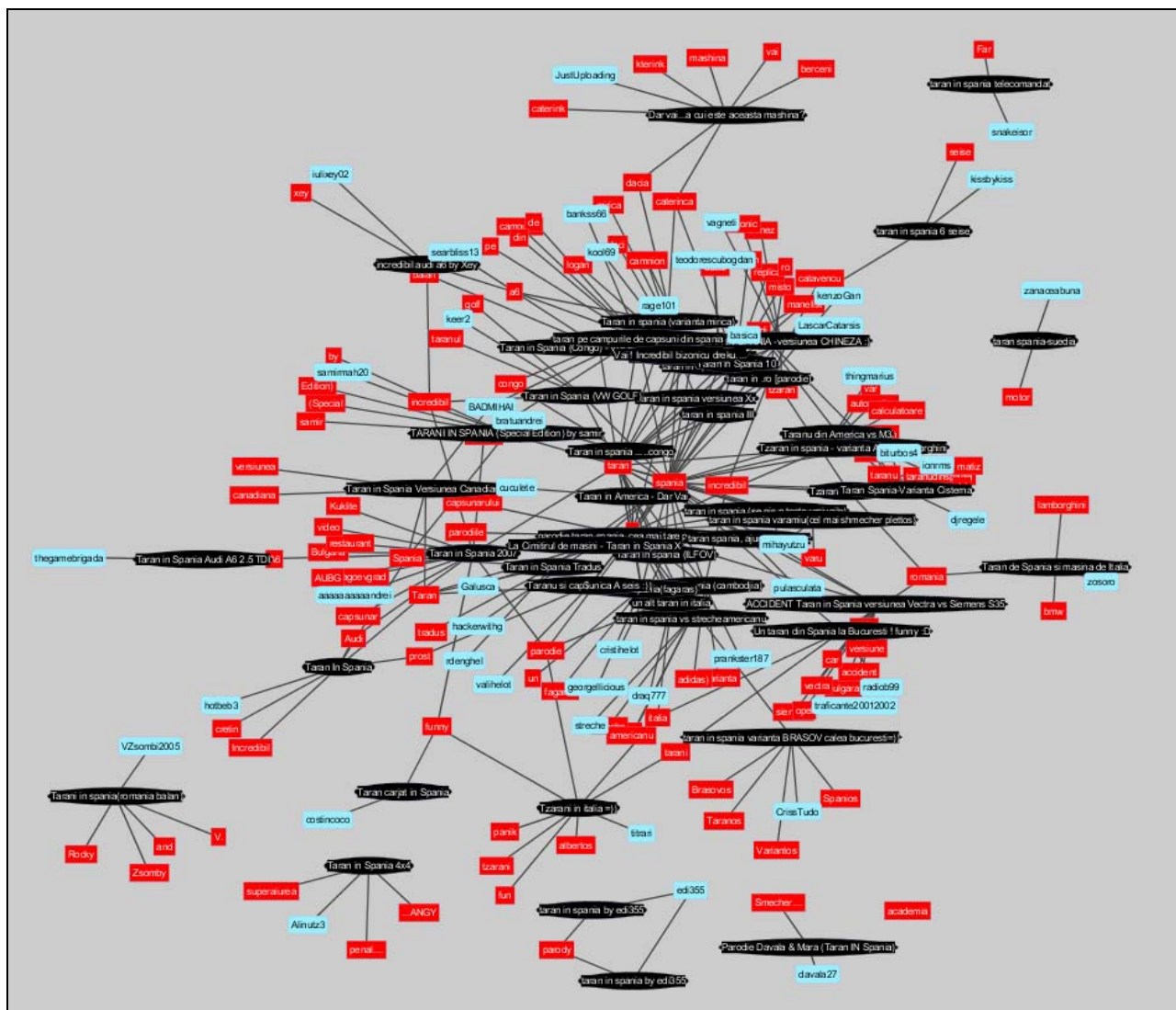
Each video is posted by a member/author registered on YouTube. A list of keywords (tags) is associated with each video. The graph that we draw therefore contains three types of nodes: video, author, and tag. It also contains two types of links: video-author, video-tag. A set of data is associated with nodes: for videos, we are given the number of views, the number of comments, etc; for authors, we are given the nationality and the age.

Interpreting the graph on next page will require zooming in on certain zones. We can, however, go ahead and make a few remarks:

1. The vast majority of authors only published one video on the ‘Taran in Spain’ topic; 42 users only published one video, 5 published two, and none published more than two.
2. The vocabulary (in terms of concrete tags) used is broad. Numerous tags are only used one time. The tags *taran*, *in*, and *spania* nonetheless significantly structure the graph, and this becomes even more apparent if we use their variations (with or without uppercase, in the singular, plural, etc.): *Spania*, *Taranu*, *tzaran*, etc. There is hence no doubt that we are in the presence of a video corpus playing upon a common and clearly identified motif or theme, a type of ‘same old tune’ played again and again with the goal being to innovate using a codified common collection. Not surprisingly, we see also come across tags like ‘version’ or even ‘variation’. In effect, the videos are but variations on a single model.

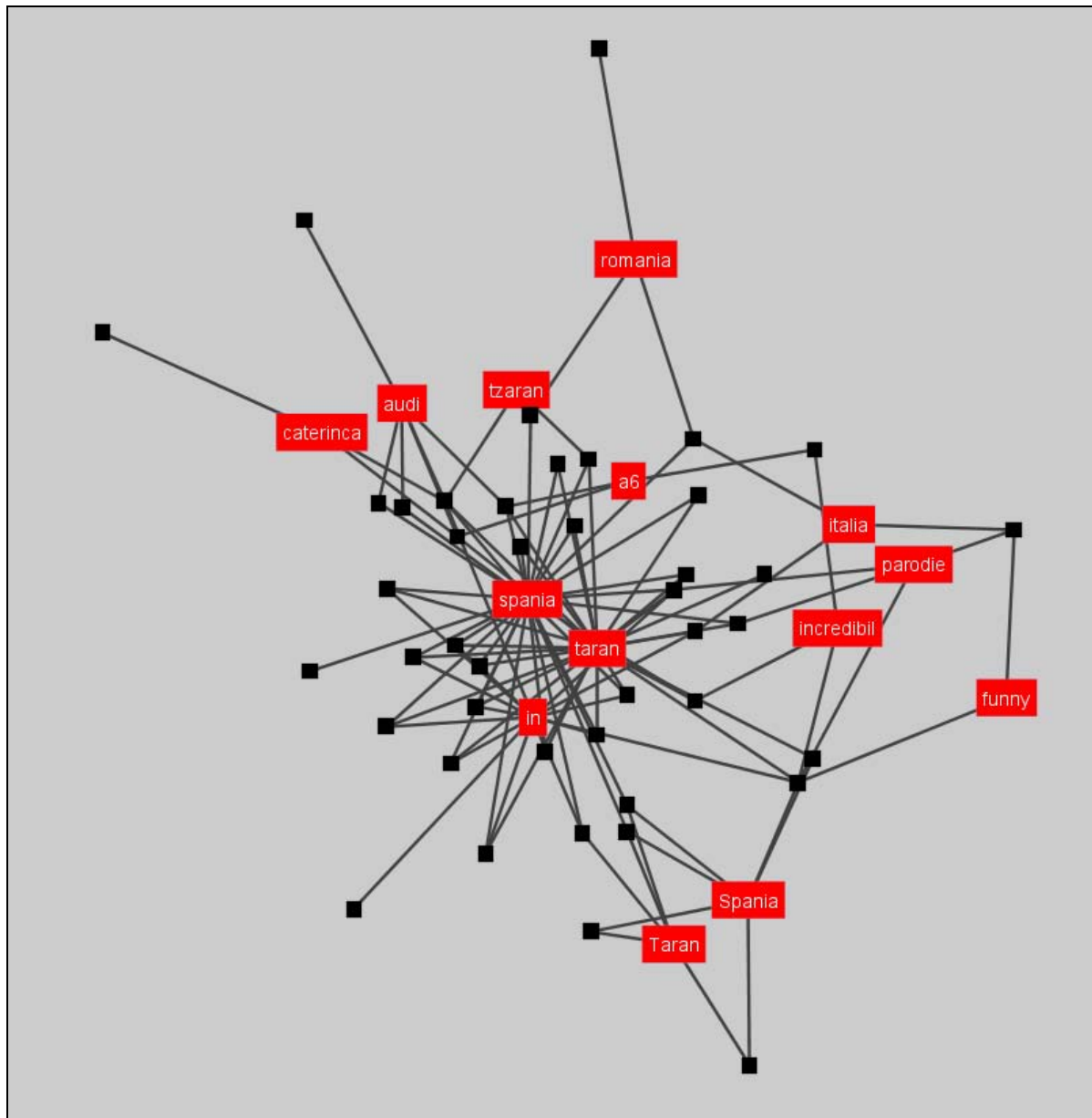
⁴⁶ <http://www.youtube.com/watch?v=rIfnttS6QiY>

⁴⁷ http://www.youtube.com/watch?v=2C7QG_f4pA



Graph Legend: Black nodes represent videos; blue nodes denote actors; red nodes indicate tags.

Below: graph of tags used in at least 3 videos of the corpus (to make the graph more readable, videos appear as black squares without titles; actors were deleted from the graph, as well as videos not linked to the represented tags).



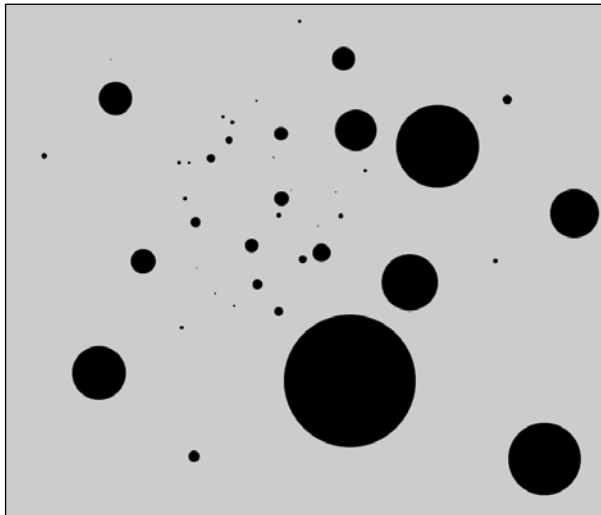
In reality, the previous graph is indicative of the main categories of tags used in the corpus. There are three such categories:

1. parody, mockery, entertainment, or what we could call the festival theme. Here we find tags like 'parody', 'incredible', 'funny', or 'taran' ('peasant' in Romanian with a mocking connotation). If we look at the entire corpus, we find terms like 'prost' (idiot), 'parody', 'fun', 'moron', etc.
2. automobile and car brands, or to foreshadow the direction of our analyses the theme of the image success abroad: here, we have tags like 'audi' and 'a6'. The complete corpus contains a high number of tags on this theme. We will only cite a few of them: 'Logan', 'Opel', 'Vectra', 'car', 'BMW', 'Lamborghini'.

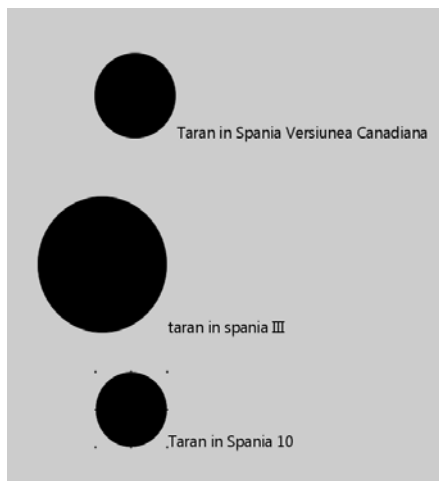
3. locations and nationalities, or what we could see as the diaspora or the mobility theme: on the graph above, we find tags like 'Italia', 'Romania', 'Spania'. In the rest of the corpus, we have 'China', 'Bulgara', 'Dubai', 'Congo', 'Candiana', 'Amirecanu'.

At this point, we can presume that entering a unity into our corpus will require studying the ways these three festival themes come together, the image of success abroad, and the diaspora/mobility. We shall see that what links these three themes causes a certain tension between them, a certain controversy or polemic.

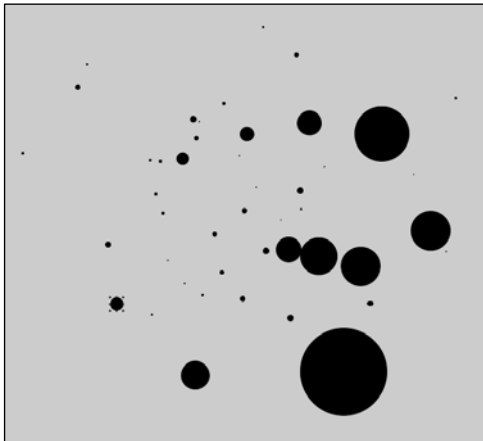
Now we shall propose representations that will reveal a few prominent nodes in our corpus.



Here we only have a few video nodes. The size depends on the number of times each video has been viewed.

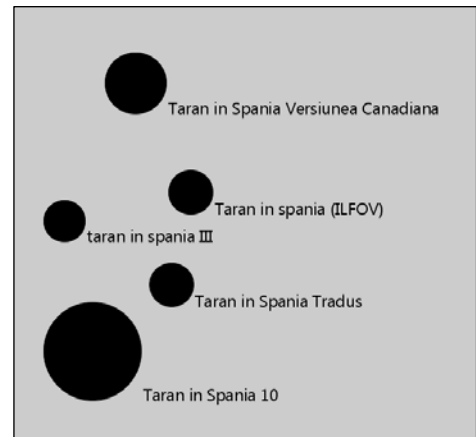


We have three videos seen more than 100,000 times and 15 videos that were viewed less than 5,000 times.



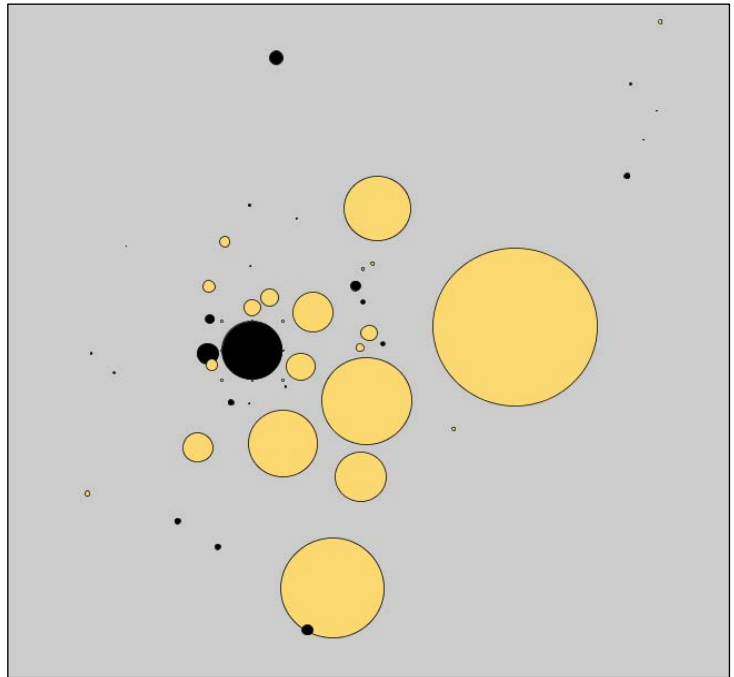
On this representation, the size of nodes depends on the number of comments posted about the video (it is no surprise that this representation is very similar to the previous one).

We have three videos that received over 100 comments (and 19 videos that received under 5 comments.)

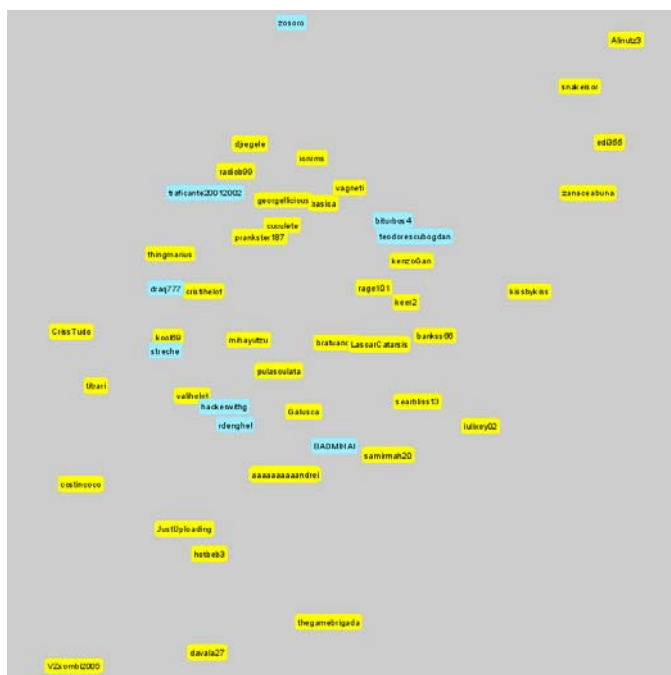


The first videos from the “Taran in Spania” series were published in April 2006. In this representation, the videos published in April 2006 are in beige, and those published later are in black. It is easy to see that it was in April 2006 that the buzz was created.

This is even more apparent when we look at the number of viewings (see representation below using the same legend). The only video in black – which was viewed numerous times – dates back to October 2006.



Now, we will look at actors having published videos. We should specify that there is little doubt that for most of them these actors were also the people who played in the film.

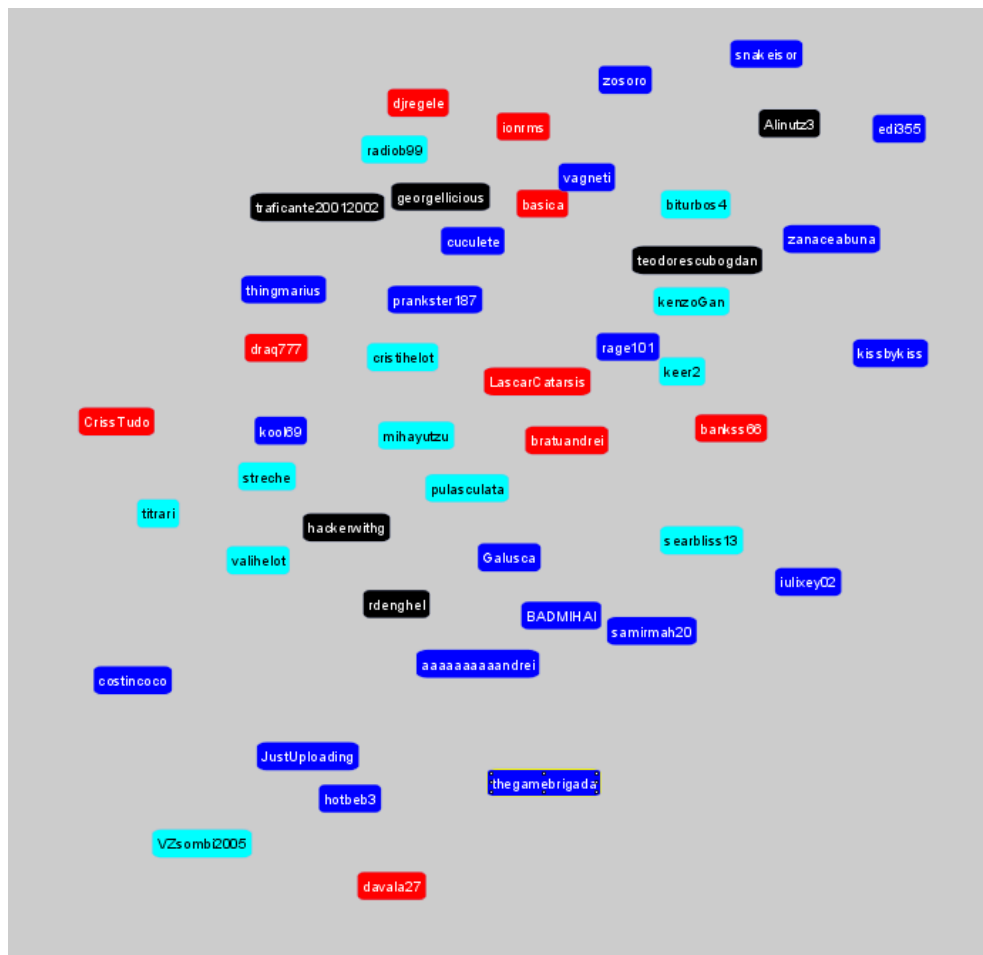


On this representation, actors whose country is Romania are in yellow. The others are in cyan. In fact, YouTube asks its members to give their country, but we restate that for a migrant population this is ambiguous because the country indicated could be either the home country or the host country. The same applies to our case. As our content analysis of the videos will show, there are many videos that were actually shot in Romania.

Finally, we will look at the age of actors.

Legend:

- black = actor > 30 years old
- cyan = 25 years < actor < 30 years old
- blue = 20 years < actor < 25 years old
- red = actor < 20 years old



So we have:

- 6 actors over 30 years of age
- 12 actors between 25 and 30 years of age
- 20 actors between 20 and 25 years of age
- 9 actors under 20 years of age.

The average age is 24.5 years.

IV. Conclusions

In order to draw conclusions about the implications of our analysis for integration, we must recall that for the connected migrant integration means precisely ‘staying connected’, implying the combination of several competences: high mobility and communication; to be able to play strategically with one’s links and with the digital equipment which mediates the connectivity; to find a balance between relationships in the home country and its migrant citizens (internal connectivity) and those in the host country and its members or with other migrant groups (external connectivity).

1) As regards the competence to link and to be linked, the conclusions from our case studies are the following:⁴⁸

- Web 1.0 sites favour intra-community links by mixing inextricably links within the host country and links between host and home country. We can say that the dimension of internal connectivity prevails widely and that the development of an active community life in the host country is considered and promoted as a prerequisite of successful integration.
- Web 2.0 provides us with a large variety of combinations of internal and external connectivity. In the case of the Moroccan blogosphere, we observed that the participation of migrants in such a mostly national network did not prevent them from developing individual projects in the host country. The blogoma reveals a balance between internal and external connectivity which favours multiple belonging.
- As regards the participation of second generation Moroccan migrants on Skyblog, we observed that ethnicity and nationality did not constitute a crucial criterion in relational activities. For that, we might think that external connectivity prevails over internal connectivity. Nevertheless, if we conceive of internal and external connectivity in terms of geographical and social nearness (offline interactions) rather than in terms of ethnic/national belonging, we have to conclude that internal connectivity prevails over external connectivity (the online reproduction of offline social life prevails widely over the creation of new link). This leads to suggest that when looking at connectivity we must consider both (and at the same time) ethnicity and social conditions.
- The case of the Moroccan migrant musicians unveils different strategies. Indeed, the crucial issue for these individuals is to increase their fame; it implies efforts to become as visible⁴⁹ as possible to a hopefully large audience. The deployed strategy consists in multiplying diverse links. In that sense, external connectivity prevails. However, this multiplication has to follow certain rules: the artist cannot spam the audience, but has to succeed in being located in a relatively specific musical universe; in some cases, this implies privileging links inside his/her own ethnic community. On the other hand, increasing fame requires a step-by-step development of one’s network, somehow transcending one’s network by leaning on it. That is why internal connectivity can be conducive to external connectivity.

⁴⁸ It should be noticed that the distribution of links between internal and external categories is a helpful quantitative indicator, but ignores both the value of links (positive, negative or other) and their intensity (weak or strong ties).

⁴⁹ It is the *lighthouse* (phare) model described by D. Cardon in his paper *Le design de la visibilité : un essai de typologie du Web 2.0* : <http://www.internetactu.net/2008/02/01/le-design-de-la-visibilite-un-essai-de-typologie-du-web-20/>

- As regards the Romanian embroiderer bloggers, the model is again different. Indeed, beyond a very dense Romanian transnational network, these bloggers belong to an international network grounded on a common interest and including women from Italy, Canada, Scotland and other countries. In that sense, external connectivity is an extension of internal connectivity without clear cuts between the two.
- Finally, the parody of the images of success abroad on YouTube involves almost exclusively Romanian people, migrants or at home. We are thus in the presence of internal connectivity. Nevertheless, this example shows that internal connectivity does not have a unequivocal meaning, as these links are grounded on parody and are likely instrumental for relation negotiations (between the migrant and the home country), maybe even miming a conflict.

These different examples highlight the manifold blends of internal and external connectivity found in migrants communities' usage of Web 2.0. Defining a typology of these combinations could be the goal of future research. Such a typology could help better answering to the thorny question of social computing potential for the development of migrants' social capital and integration.

2) As regards types of migrants' integration, we have identified in the web two dynamics. The first one is top-down integration, which crucially relies on online official hospitality services. These are offered by institutions, especially public authorities and sometimes non-governmental organisations or private companies. Numerous Web 1.0 diaspora websites link to these services. Although these services are often well structured, they only contribute on an informational level to the complex process of integration.

The second process is bottom-up integration, which relies on informal and social hospitality and is directly linked to the dynamics of bonding and bridging and to what we may call 'sponsorship' or 'working' social capital. While this kind of integration is difficult to measure, it tends to be efficient and effective. We have observed it in Web 1.0 sites and applications like forums and discussion lists, but it is much more present and diversified in Web 2.0 sites. The present research will hopefully lead to a broader study of this model of integration.

Recommendations

Policy makers at European, national and local level have, almost by definition, all the means to improve the first type of integration dynamics. In the case of bottom-up integration, their role is less obvious, as integration appears much as an auto-generated process. Nonetheless, policies may aim at improving access to digital equipment and training in order to stimulate and intensify this kind of integration which is already at work.

In broader terms, we believe that fully acknowledging the presence of the connected migrant, which will be further enhanced by Web 2.0 services, could significantly improve migration policies. These still tend to be based on a vision that conceives the migrant according to a series of breaks and oppositions inherent to his/her fate and constantly used as a chief organizing principle of theoretical and political reflection on mobile populations: mobile/immobile, neither there nor here, absent/present, in the centre/at the periphery, and so forth. In a world characterized by generalized mobility and unprecedented communication opportunities, these concepts look increasingly as unacceptable historical and sociological simplifications. Mobility and connectivity provide a better ground for the definition of the

twenty-first century migrant. Together they enable and guide a new continuity in migrants' lives and in their relationships with their social environments at home, in the host country and in between. Yesterday the motto was 'immigrate and cut your roots', today it should be 'circulate and keep in touch'. This evolution seems to mark a new era in the history of migrations: the age of the connected migrant.

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Technical Note

Abstract

This report explores the research hypothesis that the shift from Web 1.0 solutions (exemplified by web portals, forums etc.) to Web 2.0 services (specifically blogs and online social networks) leads to mutations in migrant communities' collective organization and forms of living together. The above hypothesis was tested on a set of cases concerning the Romanian and the Moroccan migrant communities in Europe (mostly in France).

The specific case studies are the following: the approach to community organisation, integration and other aspects of two well-known Web 1.0 sites for migrants (Yabiladi for Moroccans and TheBans for Romanians); the role played by migrants in the development of the Moroccan blogosphere comprising 20-30,000 bloggers; the motivations behind relations established among second generation Moroccan adolescent and young adult immigrants on the Skyblog social networking site; the use of MySpace by Moroccan migrant musicians; the wide network of blogs of Romanian embroiderers throughout Europe; the image and parody of successful Romanian migrants on YouTube.

From a technical standpoint, these studies are based on an innovative web information system that enables us to monitor virtual spaces of migration by using various approaches and tools to understand their structure by analyzing and conceptualizing them via cartography (spatial representation).

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