GJSS
Graduate Journal of Social Science

Special Issue:
Methodological approaches to the study of virtual environments and online social networks

Special Editor:
Delia Dumitrica

http://gjss.org

The Graduate Journal of Social Science (ISSN: 1572-3763) is an open-access online journal focusing on methodological issues of interdisciplinary relevance. The journal publishes two issues per year, one of which is thematic and one of which groups innovative and instructive papers from all disciplines. GJSS welcomes submissions from both senior and junior academics, thus providing a forum of publication and exchange among different generations engaged in interdisciplinary research. GJSS is published by EBSCO publishing.

For subscription inquiries, requests, and changes, please visit: http://gjss.org/index.php?/Contact-us/Graduate-Journal-of-Social-Science.html. or Email: editors@gjss.org

CONTENTS

Book Reviews

CONTRIBUTORS

Joseph Clark is a doctoral candidate in Environmental Communication at Florida State University. He is currently writing a dissertation on the way 'nature' is depicted in multiuser virtual worlds, and is interested in the ways remix culture is being expressed in virtual worlds and its impact on policymaking and cultural forms. He currently works in a faculty position providing instructional design and technology consultation and faculty development services. Website and CV: http://jsclark.net . Email Address: jsclarkfl@gmail.com

Cyntia Darisse has been a student researcher with the Research Lab on Political Communication (GRCP) since January 2008. She holds a master's degree in Public Communication from the Information and Communication Department of Université Laval. Cyntia is also a professional researcher with the Groupe de recherche sur les mutations du journalisme at the same institution.

Eve Forrest is a PhD student based at the Centre for Research in Media and Cultural Studies at the University of Sunderland. Her research concentrates on photographic practices, offline spaces and Flickr and is particularly interested in discussions surrounding the more embodied practices and doings of photographers. Email Address: eve.forrest@sunderland.ac.uk

Thierry Giasson is an assistant professor in the Information and Communication Department at Université Laval, in Québec City. He holds a Ph.D. in Political Science from the Université de Montréal. Dr. Giasson is the lead investigator of the Research Lab on Political Communication (GRCP) at Université Laval. He is also a research associate in the Institut Technologie de l'information et Sociétés at Université Laval and at the Centre for the Study of Democratic Citizenship at McGill University.

Nicholas Jensen is a PhD Candidate at the University of Cardiff. His research interests are in Deleuze and Guattari, Internet Studies, Post-humanism, Philosophy, Psychoanalysis. Email Address: JensenN@cardiff.ac.uk

Andrea Jonahs is a Ph.D. student in Communication Studies at the University of Calgary. Her research interests are on the narratives of interracial relationships, particularly the negotiation between lived experiences and media representations. She has a Masters in Fine Arts in Nonfiction Writing from the University of Iowa and has been previ-

ously published in literary journals. Email: avjonahs@gmail.com

Kristeen McKee is an Assistant Professor in the Department of Communication Studies at Huntington University. Her research interests are informed by the study of visual communication, rhetorical criticism and representations of technology in contemporary cultural artifacts. She is currently pursuing an interdisciplinary PhD in the Department of Human Studies at Laurentian University. She also serves as the Associate Director of The Lougheed Teaching and Learning Centre of Excellence at Huntington University. Email Address: ky_mckee@huntingtonu.ca

R.M. Milner is a PhD candidate in the Communication Studies program at the University of Kansas, located in Lawrence, KS, USA. His research intersects new technology and public discourse, particularly the interactions between institutions and individuals in an age of digital-connectivity. He has recently published several articles on Fallout fan-producer discourse. Email: rmmilner@ku.edu

Andreas Kramm is a Master/postgraduate student at the Institute of Cultural Anthropology/ Fraunhofer Institute of IT Security SIT, whose research interests include Social and Technology Studies, social interaction in social network sites, and knowledge construction in neuroscience. Email Address: andreaskramm@web.de

Dinu Gabriel Munteanu is currently writing his doctoral thesis under the sponsorship of Nottingham Trent University's School of Arts & Humanities. His academic endeavors have been eclectic and interdisciplinary, ranging from youth culture and media studies, to sartorial history. After writing an M.A. thesis dealing with the cultural history of lingerie (Maastricht University, 2009, top 3% award), he is now examining popular tumblr.com microblogs, in an effort to undestand why and how young people synesthetically construct nostalgic forms of 'pastness' online. Email Address: dinu.munteanu@gmail.com. dinu.munteanu@ntu.ac.uk

Maud Radstake works as a researcher and manager for the Centre for Society and Genomics, Institute for Science, Innovation and Society (ISIS) at the Radboud University Nijmegen, the Netherlands. She has organised and moderated dialogues and interactions between those who make decisions on genomics in science and policy and those who (potentially) are or will be affected by genomics knowledge and applications. She has organized the online discussion that is described as the second case in this paper. Email Address: m.radstake@science.ru.nl

Vincent Raynauld is a PhD student in the School of Journalism and Communication at Carleton University in Ottawa, Ontario. He is also a research associate at the Research Lab on Political Communication (GRCP) at Université Laval

Peter Scholten is Peter Scholten is a postdoctoral researcher at Umea University (Departmentof Social & Economic Geography) in Sweden. He has defended his PhD at the Centre for the Sustainable Management of Resources (CSMR), Institute for Science, Innovation and Society (ISIS) at the Radboud University Nijmegen, the Netherlands. His research has focused on areas of societal innovation and specifically on the role individual actors play in the process of preparing, instigating and implementing of policy changes. The WaalWeelde project has been one of the case studies for his PhD thesis..

Katja Schönian is a PhD Student in Sociology at the Department for Sociology, Institute for Advanced Studies (IHS), Vienna. Her research interests centre on practice theory, organisations studies, and design and analysis of software. Email Address: schoenian@ihs.ac.at

Hayley Trowbridge is a Postgraduate Research Student in the Department of Communication and Media at the University of Liverpool. She studies American Independent Cinema, Digital Cinema, Distribution, Marketing, Convergence and Interactivity. Email Address: hayley07@liv.ac.uk

Editorial
Special Issue: Methodological Approaches to the Study of Virtual Environments and Online Social Networks

Dr. Delia Dumitrica

With more and more graduate students interested in the ubiquitous presence of new media in our lives, questions of methodology become crucial: how to study online environments? What challenges and barriers have to be taken into account when approaching the internet as a site of research? How are graduate students re-appropriating and adjusting the existing methodological repertoire of social sciences to the investigation of virtual worlds and online social networks? Driven by such questions, this Special Issue brings together an eclectic group of young researchers negotiating the conditions under which their interest in and approach to virtual worlds and online social networks become a legitimate and established part of social sciences methodologies. The research presented here bridges both quantitative/qualitative and social/technical divides. Most of our contributors in this issue are currently undertaking their MA or PhD studies in journalism, communica-

tion and culture, cultural anthropology, sociology, arts and humanities, or science and innovation studies, while three of the authors hold a faculty or a research position. In terms of geographical scope, the contributors are working or studying in Austria, Canada, Germany, the Netherlands, the United Kingdom and the United States.

Virtual environments and online social networks have become an increasingly important social arena where our personal and public lives are unfolding. Yet, the study of such arenas is just as difficult and complex as the study of social life in general. As Steve Woolgar (2002, 4-6) has remarked, we are still in the process of moving from the "sweeping grandiloquence" of a research program interested in the social context of information and communication technologies (ICTs) to the realization that our theoretical vocabularies, tools of analysis as well as personal beliefs play a central role in the very constitution of this research

program. He further observes that we need to question who we (the inhabitants and researchers of these virtual spaces) are, what new lines of division and exclusion are (re-)introduced, and how the intertwining of the virtual and the real translates for different groups, cultures and societies. All of this calls for enhanced reflexivity in the process of doing research in and on cyberspace and reminds us that the latter is primarily a social space as opposed to a space of anonymity, freedom, equality and, above all, unrestricted possibility. Indeed, cyberspace provides a sphere in which the longstanding issues of the relation between social structure and agency, the position of the researcher and the politics of methodological choices remain crucial.

I would like to echo this perspective here: all too often, the students I teach take it for granted that virtual environments are available to everyone everywhere, that such spaces are within their control, and that if exclusion or division do happen in and around these spaces, they are a consequence of "bad", yet personal, choice. From this viewpoint, there is little to be said about the relation between these highly individualized virtual spaces and, for example, the social implications of the commodification of identity, information and communication. In a virtual world like Second Life, the buying and selling of body parts such as skins, enhanced breasts or lips, or chiseled pectorals are at the same time a familiar continuation of the mainstream obsession with beautiful and fit bodies, and a surreal, yet disturbing, exaggeration of it (Dumitrica and Gaden 2008; Gaden and Dumitrica 2011). A dismissal of such practices as simple "games", "fantasies" or "escapism" fails to consider the mutual shaping of online and offline social practices. In questioning this surreal commodification of the body, we are also questioning the values, norms and practices through which we attempt to create and make sense of our own lives.

In his usual bold manner, Marshall McLuhan (2010, 108) once declared that the mere presence of a medium was the "message," "for the 'message' of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs." The "virtual" (or the "cyberspace") has been similarly hailed as the new solution to all social problems; its mere existence seemed to make change happen. This rhetoric of benefic change portrayed the internet as "a technological marvel, thought to be bringing the new Enlightenment to transform the world […]. All were supposedly connected to all, without boundaries of time and space" (Wellman 2004, 124; see also Mosco 2005; Woolgar 2002). Yet, as inspiring as McLuhan's statements may be, it is only too easy to forget that there is no such thing as a "mere presence" or a "sudden introduction" of virtual

spaces into our lives. The functions, configurations and values that come to constitute these techno-spaces are molded political choices and negotiations over the distribution of resources and power relations in society. The study of "virtual environments" should not ignore the ways in which social and technical aspects are infusing each other.

In many ways, the contributions to this Special Issue address these concerns. Each methodological approach highlights an aspect of the difficulties in studying virtuality. Together, they point to the complexity of these "spaces," signaling that the mere labels of "virtual environments" and "online social networks" are violently forcing a multiplicity of experiences and dynamics under all-encompassing, yet still empty phrases. Each one of the articles included here forces the reader to acknowledge that there is no such thing as a unitary "virtual space." Furthermore, the contributions are also prompting us to acknowledge the role of our own disciplinary constraints in approaching online worlds as sites of "legitimate" academic research. The contributors to this Special Issue reflexively engage with their own understanding of online worlds in their papers. For instance, Milner asks to what extent his own method of "silently analyzing 'discourse' from a forum, comments section, blog, chat room, or Twitter feed was good enough to get to 'culture.'" Jonhas recalls how

a discussion with one of her professors prompted her to question how she understood the role of the infrastructure of websites in shaping users' interaction with the concept and practice of "race." In a similar vein, Schönian attempts to bring to light the ongoing choices that researchers have to make throughout the research process, reminding readers of the difficulties of capturing and analyzing everyday practices.

Putting together this Special Issue has been particularly rewarding for two reasons: Firstly, it was encouraging to see the variety of approaches in the field as well as to consider the epistemological questions they raised. As Burnett, Ess and Consalvo (2010, 2) remark, the field of internet studies is increasingly becoming more mature, with a growing "body of literature that represents […] an increasingly sophisticated set of theoretical reflections regarding appropriate methods and research ethics." One of the implicit threads running through this edition is that of the crucial role of the researcher's a priori assumptions about online spaces in the development of the research design. The papers included here expand the existing ethnographic approaches to virtual environments by incorporating insights from semiotics, phenomenology and postmodernism. Where the existing literature on online social networks tends to focus on identity, networks, connections and privacy (boyd and Ellison

2007), this Special Issue looks into the details of developing suitable research tools for these networks, proposing ways in which the traditional research methods can be adapted to new configurations. For example, Munteanu approaches photography blogs from a postmodern perspective, recommending an analysis that moves "from preliminary empirical, observational online data towards speculative possibilities of framing these observations within a credible theoretical context." Forrest, on the other hand, argues for a non-visual approach to photography by focusing on the "practices and 'doings' of photography" and their potential for researching the online practices of sharing photographs.

Secondly, it was particularly rewarding to note the increasing interest in recuperating the interplay between the technical affordances and the social aspect of online environments. In my previous work on virtual environments (Dumitrica and Gaden 2008; Gaden and Dumitrica 2011; Dumitrica 2011), I felt that this interplay was often ignored at the expense of an interest in analyzing text, images or behavior online.

The first section of this edition brings together five articles dealing with various online and offline practices of use. Working with the example of video game fans, Milner questions the often taken-for-granted assumptions that online cultures are either "texts" or "places," and that the researcher is either "participant" or "observer." He proposes that such assumptions need to be brought to the forefront of the research process and reflexively interrogated in terms of the methodological choices that they recommend and legitimize. By exploring his own research on FallOut fans, he discusses the complex relationship between methodological and the researcher's own views of online environments. In a similar vein, Forrest argues against the artificial separation of online and offline practices. Using Flickr as an example, she considers the advantages of adopting a mixed theoretical framework combining phenomenological philosophy and non-representational theory. Recuperating the historical dimension of visual representation, Clark proposes an analysis of the representation of nature in Second Life. Using semiotics, he draws our attention to the importance of "ideology" as a theoretical concept in understanding and analyzing such virtual environments. The last two papers in this section take us into the realm of blogs. Reynauld, Giasson and Darisse explore the challenges and opportunities of using blogs as data for analysis. Looking at the case of Québec political bloggers, they argue that traditional sampling techniques need to take into account the specificities of the medium. In contrast, Munteanu offers a different take on blogs: his analysis, focused on a "nostalgic" or "vintage-oriented" blog, challenges

the view of young people as proponents of "newness."

Although several of these contributions raise questions about the relation between the code behind online applications, their content (which is visible through the user-friendly interface) and the ways in which these applications are used, the papers grouped in the second section of this Special Issue take this relationship as a central lens through which to look at virtual spaces and social networks. In her discussion of online dating sites, Jonahs questions to what extent the choices embedded in the infrastructure of these websites are part of a wider discourse on "race." In the following paper, Kramm details the methodological challenges faced by a multidisciplinary team investigating online social networking sites. He argues for the necessity of conceptualizing such sites as both a field of research and a tool for collecting the data. Schönian further investigates the relationship between the technical and the social aspects of the internet. She explores the theoretical and methodological possibilities opened by the idea of "praxiography," an epistemological approach proposed by anthropologist Annemarie Mol (2002) that focuses on how objects are used and made sense of. Schönian provides an insight into how this idea has shaped her own research on the upgrade of a telecommunication company's intranet. The last contribution in this

section, by Radstake and Scholten, reports on the inclusion of an online tool for connecting citizens and experts in a larger project. Although their research focuses primarily on the challenges of incorporating such a tool in citizen-engagement processes, this article also prompts us to reflect on our own assumptions of what online applications can or cannot do. The question of infrastructure may not be at the heart of the research project, but it certainly looms in the background of the researchers' understandings of what the internet is, what it can do and how it works.

The Special Issue concludes with four book reviews providing a synopsis of published works on social media analysis software (Trowbridge), ethnographic practices in Second Life (Jensen, Chin) and methods for analyzing learning processes in virtual worlds (McKee).

Importantly, all of these contributions approach methodological issues for the study of virtual worlds and online social networks from the viewpoint of graduate students. This is an opportunity to reflect on the sinuous process of doing research: too often, our research is presented in a format that hides away the complicated operations through which we made choices about our case and our analysis, why we selected particular perspectives and ignored others, and how we advanced ideas and arguments, only to go back and reformulate them again and again.

As most of us discover through our graduate research work, questioning one's approach to and understanding of these online environments is simultaneously a process of self-discovery.

Acknowledgements

I would like to thank all of the reviewers who have made this Special Issue possible. Both graduate students and faculty members alike have ensured that the papers selected for the edition meet the academic standards that we have come to expect of peer-review publications.

References

boyd, d. and N. Ellison. 2007. Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication,* 13(1): 210-30.

Burnett, R., M. Consalvo and C. Ess. Eds. 2011. *The Handbook of Internet Studies*. Malden, MA: Blackwell.

Dumitrica, D. 2011. An exploration of cheating in a virtual gaming world. *Journal of Gaming and Virtual Worlds*, 3(1): 21-36.

Dumitrica, D. and G. Gaden. 2008. Knee-High Boots and Six-Pack Abs: Autoethnographic Reflections on Gender and Technology in Second Life. *Journal of Virtual Worlds Research*, 1(3). http://journals.tdl.org/jvwr/article/view/323 (accessed November 20, 2011).

Gaden, G. and D. Dumitrica. 2011. Disciplining Fantasy Bodies in Second Life. In Krijnen, T., C. Alvares and S. Van Bauwel. Eds. *Gendered Transformations. Theory and Practices on Gender and Media,* Bristol: Intellect, 133-147.

McLuhan, M. 2010. The medium is the message. In Durham, M. G. and D. M. Keller. Eds. *Media and Cultural Studies.* KeyWorks, Malden, MA: Blackwell, revised edition, 107-116.

Mol, A. 2002. *The Body Multiple*, Durham, NC: Duke University Press.

Mosco, V. 2005. *The Digital Sublime. Myth, Power and Cyberspace,* Cambridge, MA: MIT Press.

Woolgar, S. 2002. Five rules of virtuality. In Woolgar, S. Ed. *Virtual Society? Technology, Cyberbole, Reality*, Oxford: Oxford University Press, 1-22.

The Study of Cultures Online:
Some Methodological and Ethical Tensions

R.M. Milner

This paper, birthed out of personal, methodological and ethical tension, examines the study of cultures online. Reflecting on my previous research on fans of the videogame series Fallout, *I argue anyone studying interaction online, and making cultural claims based on these studies, must be mindful of two tensions. First, the study of cultures online demands we decide whether we frame online interaction as 'place' or as 'text'. Next, the study of cultures online demands we decide whether we construct our role as 'participant' or 'observer'. These tensions have methodological and ethical dimensions. Ultimately, scholars of cultures online must make these decisions reflexively. Their research questions should work in concert with their methods, and their claims must be appropriate for the methodological and ethical positions they take.*

Keywords: Culture, Online, Methods, Discourse, Ethnography

A budding methodological crisis

This paper is birthed out of a personal methodological tension, which I'm trying to address before it grows into a crisis. I have, whenever pressed, essentialized my research as the study of *cultures* online. I'm interested in the ways our digitally-mediated interactions create and reflect cultures, subcultures, and social collectives. Coming from the Communication discipline, this project has bent toward the discursive: the study of social texts. In particular, I've closely followed the tenets of discourse analysis (e.g., Fairclough 2003, Mautner 2005, Tracy 2001) in my own research. I've only given minimal attention to how a detached observation of texts online might be inadequate for understanding cultures online.

My goal here is to correct this, to problematize what has been accepted unproblematically in my own research. I call this a *personal* reflection because I don't aim to decide for anyone else how to conduct research. Any project demands independent contextual sensitivity, especially regarding methods and ethics. Rather, I aim to reflect on broader methodological and ethical issues and critically apply them to my own methods. My hope is that this reflection, coupled with a clear outline of some of the tensions inherent to the study of cultures on-

line, will be useful to other scholars grappling with the same questions. This outline might point out some prescient questions, if not easy answers.

The discussion I join is an increasingly important one. It's not a new one. Methods textbooks for qualitative data online have been around for years (e.g., Jones 1999, Hine 2005b, Markham and Baym 2009), and digitally-mediated interaction is gaining prevalence in qualitative analysis across disciplines. As Hine (2005a, 1) argues, 'there are few researchers in the social sciences or humanities who could not find some aspect of their research interest manifested on the internet'. This is true whether your study culture discursively (Herring 2001, Mautner 2005) or ethnographically (Hine 2000, Markham 1998).

These methods texts argue the study of cultures online isn't as simple as replicating old methods in new contexts. Markham (2008, 250) says 'new communication technologies privilege and highlight certain features of interaction while obscuring others, confounding traditional methods of capturing and examining the formative elements of relationships, organizations, communities and cultures'. Gajjala (2002, 184) says questions of cultural representation 'are complicated by the nature of the medium for communication, which blurs various categories such as public/private, audience/author, producer/consumer,

and text/human subject'. In short, new communicative contexts mean new methodological tensions.

In this essay, I'll focus on the two methodological tensions most salient to my own research. I'll therefore address two dyads: one dealing with the nature of the object studied and the other with the role of the researcher in that study. In regards to the object of study, there's a tension between whether cultures online should be considered place or text. Regarding the role of the researcher in analysis of cultures online, there's a tension between whether the researcher should be a participant or an observer. These two dyads will be the source of this reflection, even as I admit they're an oversimplification of a myriad of methodological issues and perspectives.

The methodological tensions highlighted here are riddled with ethical tensions because:

in a very real sense, every method decision is an ethics decision, in that these decisions have consequences for not just research design but also the identity of participants, the outcomes of our studies, and the character of knowledge which inevitably grows out of fieldwork (Markham 2008, 251).

Therefore, in each dyad, I'll focus on the ethical as well as the methodological. I'll ask what makes for sufficiently honest or accurate representation when studying cultures

online; to what extent should we treat discourse as public and published; and to what extent are we responsible for revealing ourselves and our research purposes to those we study. First, however, I'll provide background to my own research, the methodological assumptions that underpin it, and the methodological questions that birthed this budding crisis.

Culture and discourse in the study of Fallout fans

In many ways, the field of 'online ethnography' spawned this reflection (Hine 2000, 2005b; Markham 1998, 2008; Miller and Slater 2000). My engagement with this field first caused me to wonder if my methods matched my claims. When I read Markham's (2008) discussion of methods, politics, and ethics in ethnography online, it haunted me for days. For a communication scholar who was content with keeping analysis at the level of discourse, Markham's warning about 'interpreting the other as text' (251), instead of fully sentient subjects, resonated. Was it essentialist or reductionist to assume that silently analyzing 'discourse' from a forum, comments section, blog, chatroom, or Twitter feed was good enough to get to 'culture'? Methodological work on online ethnography provided guidance as I began to problematize my own notions of what 'culture' and 'discourse' might mean to a researcher of interaction online.

I recognize 'culture' and 'discourse' are not simple terms, even less so when tied to interaction online. 'Culture' has meant many things to many different scholars over the years, and 'discourse' is just as ubiquitous and amorphous. However, each of these ideas is essential as I problematize the methods and ethics of my own research. I recognize culture is something of a chimera: an explanatory 'god-term' for broad practices and perspectives that can't easily fit into one word. It's often even useful to write it in the plural, acknowledging that we exist in a social world of many diverse, contradictory, and overlapping 'cultures'.

However, it's a useful chimera, in that it gives us a way to understand social processes as intricately tied together, as socially-constructed. When I say my goal has been the study of 'cultures online', I mean I'm working toward a better understanding of practices that exist in the mediated interplay of micro-level interactions and macro-level social processes. In this sense, I rely on Geertz' (1973) foundational definition: that the study of culture is the study of 'representations'. A sensitivity to representations means I foreground 'discourses' as a methodological tool to understand culture. I see discourses as the means of cultural production and reproduction. Discourses are the social practices that reflect and reproduce culture. This position is common in

discourse analysis (see Fairclough 1989, 2003, van Dijk 1997, 2009).

Before I read Markham's (2008) work, I took for granted that discursive observation was a sufficient method for studying cultures online. In my research on the videogame series *Fallout* (Milner 2009, 2010, 2011), I used discursive observation to study how fans and producers of the series engaged with each other on the series' official website. *Fallout* 1 and 2 were computer games released in 1997 and 1998 to much critical acclaim, if not wide commercial success. The fans they did garner developed a reputation for intense devotion, however. They populated several thriving fan sites, online spaces of interaction and engagement. On these sites, fans posted advice, information, screenshots, art, modifications to the game, etc. These collectives continued to produce and interact, even as *Fallout*'s developers, Interplay Studios, faced financial trouble and *Fallout* 3 became a fleeting hope.

In 2004, there was an announcement about *Fallout* 3: the title had been sold to Bethesda Softworks, an industry giant. *Fallout* 3 was to-be updated and re-imagined. Between 2004 and 2008 (when *Fallout* 3 was released), fans of the series engaged with Bethesda Studios directly in order to influence this process. They became fixtures on Bethesda's forum space and interacted with producers and other fans of the game, as they debated what *Fallout* 3 should become. As I explored the agonism and controversy in the year leading up to the release of *Fallout* 3, I took the message board posts I collected and analyzed them as public texts. I observed from afar, reasoning that the posts were no different than letters to the editor or television commercials or political addresses.

The study did produce results. Or rather, I made arguments about cultural norms and social practices based on my observations. I argued *Fallout* fans were doing cultural work for immaterial ends: a better *Fallout* 3. I said they were 'working for the text' online (Milner 2009), engaging as a loosely-organized subcultural collective that would be impossible without mediation. I characterized fans' perceptions, goals, and even personalities, as managerial, antagonistic, cynical, or deferential, solely by reading their posts (Milner 2010). I went so far as to claim *Fallout* fans are exemplars of Lévy's (1997) 'knowledge communities': mediated subcultures built around information and interpretation (Milner 2011).

My point is not that these results are invalid, or even that my methods were dubious. Instead, I bring them up because they need to be questioned, along with what I argued from that research. I made many claims about culture and discourse online in those studies, and did so without enough critical reflection on my methods. I read the forum as a text, but reported it like a place. I

observed discourses, but reported like I was a participant in a culture. I will reflect on these methodological and ethical tensions now. I hope the practice provides utility to future research on cultures online.

Methodological and Ethical Tensions: Place/Text

The dyad. This dyad pertains to how we conceive of the cultures we study. In Hine's (2000) terms, do we see 'the internet' as culture or cultural artefact? In Markham's (1998) terms, do we see 'the internet' as a tool or a place or a way of being? In my terms, is the interaction that occurs online to been seen as a place or as a text? I mean here that we might first frame cultures online as being a bounded 'place': a community or site much like any traditional site an ethnographer would study. This is true even if 'place' here is metaphorical (i.e., in entirely-digital online environments). Second, we might frame a given online artefact as being 'text', that is communicative representations that are part of a larger cultural system. This is the position I've been most accustomed to in my experience with discourse analysis (e.g., Mautner 2005, Schneider and Foot 2005). I've chosen 'text' and 'place' over other labels because this dichotomy resonates with my own tensions. On one side, it resonates with tendencies to see cultures online as

stable, public, and representative of broader societal discourses. On the other side, it resonates with notions of interaction online being dynamic, communal, and relatively-bounded to a metaphoric 'space'. How we interpret this dyad has methodological and ethical implications. I'll discuss each here.

Regarding 'place', the term might apply most easily to 'virtual' game environments, where the technology affords a feeling of place simply by its use of computer-simulation (see Boellstorff 2008 and Williams, et al. 2006). Steinkhuler and Williams (2006) call online games 'third places': 'vital sites' of sociability and recreation that are neither work nor home. But it doesn't take graphical simulations to make online sites feel like 'places'. For instance, Kendall's (2002) 'virtual pub' is entirely text-based, and many studies of interaction online talk in terms of communal space (see Baym 2010, Elliot 2004). Markham (1998, 17) says what's important is a sense of connection:

> Although cyberspace is nothing more or less than a network of computer systems passing digitized strings of information back and forth through copper or fiber-optic cables, people who connect to this network often feel a *sense of presence* when they are online. Even in purely text-based online contexts, people establish and maintain intimate friendships, romantic relationships, and stable

communities.

Markham is very aware of her own use of spatial metaphors in her research. 'I can't help but talk about *going* to various *locations* or *places* where I meet and talk with people… Spatial metaphors are certainly ingrained in our language; we hardly notice how much we use them' (1998, 40, original emphasis). Some might point to the word 'sense' as evidence the community metaphor doesn't work for online interaction, because the best a sense can provide is something 'virtual'. Yet, others see the virtual as very real. For instance, both Baym (2010) and Chayko (2008) argue we should expand our notion of community from geography to that of more interactional criteria like social capital, shared practices, collective identity.

Markham (1998) says spatial metaphors establish a 'sense of being' in interactions online. This moves beyond a 'textual' understanding discourse online. For instance, Markham (2008) tells the story of how she framed some conversational data as 'interview texts' and therefore subjected it to unnecessary 'clean up'. This yielded less fruitful results than when she framed the conversations as vibrant, situated interactions full of social cues, conversational asides, and meta-commentary. She found that in 'cleaning up' these transcripts, she was wedging something dynamic into a tidy 'text' box. In the process,

she was missing nuances needed to understand her interaction as socially and culturally contextual. Conceptualizing the interaction less as a tidy text, and more as situated and dynamic, alleviated these shortcomings. Thinking in terms of place meant a more appropriate method and richer results.

But the 'place' metaphor has its limitations. Hine (2000, 27) provides a prescient critique. She warns that, while helpful in validating the attachments and experiences of those using online spaces, an over-reliance on the 'place' metaphor for online interactions can mean analytical blind spots:

In claiming a new field site for ethnography and focusing on the construction of bounded social space, the proponents of online culture have, however, over-played the seperatedness of the offline and the online. A focus on community formation and identity play has exacerbated the tendency to see internet spaces as self-contained cultures...Observing online phenomena in isolation discounts social processes offline which contribute to an understanding of use of the internet as a meaningful thing to do.

Hine's answer is to couple communal understanding with sensitivity to how discourse online works as cultural 'text'. This perspective appreciates the potential for online cultures to exist as a bound-

ed 'place', while interplaying with broader cultural 'texts'. This is akin to Markham's (1998) argument we understand technology as a 'tool' as well as a 'place'. While the internet is a 'tool' for building a sense of place, it is also a tool for producing relatively stable texts. A 'text' perspective sees the internet as a medium for the production and maintenance of societal discourses more than as a bounded place of cultural engagement.

Framing the internet as an integrated text rather than a bounded place fits with a trend in study of interaction online. Studies of 'the internet in everyday life' (see Wellman and Haythornethwaite 2002) argue we stop seeing 'the internet' as an entirely-new place, enabling entirely-new modes of being. Instead we should look at its integration as one part of a broader social system. Taylor (2006), who speaks of the 'play between worlds' that occurs both within and outside of the game *Everquest*, expresses a similar sensitivity to how the 'online' and the 'offline' collide and merge in the lives of players. Those seeing communication online as cultural texts are increasingly calling on us to mix 'online' data with 'offline' data in our research.

Whether our methods should always mix 'online' data and 'offline' data is an open issue to internet researchers. Orgad (2005, 2009) consistently appeals for methods that span the online and the offline,

combining online analysis with offline interviews. Hughey (2008) argues that focusing solely on online interaction (i.e., conceptualizing the research environment as an independent 'place') means ignoring critical offline categories (in this case, racial identity). Conversely, Markham (2008, 268) warns that 'if one is studying internet contexts as cultural formations or social interaction in computer-mediated communication contexts, the inclusion of embodied ways of knowing may be unwarranted and even counterproductive'. If the 'online' is the extent of the 'world' being studied, then it may not be helpful to try to get a more 'authentic' truth behind this world. Boellstorff (2008) makes a similar argument as he defends the study of *Second Life* as a bounded 'culture'. He refuses to conceptualize *Second Life* a hobby for members of other, more 'real' social worlds. Orgad (2005) acknowledges either choice might lead to essentializations or misinterpretations, saying an 'online' emphasis might favour the text and an 'offline' emphasis might favour embodied markers

I argue multiple methods can be used to bridge the online and the offline. Ito et al. (2010) take a 'media ecology' approach when framing the media-use habits of American youth, and therefore use embodied ethnographic methods to better understand mediated interaction. Miller and Slater (2000) conduct an entirely 'online ethnography' of

Trinidadians, but do so mindful that Trinidadian identity is a cultural category embedded in broader contexts. Other authors argue we appreciate how texts and discourses work between sites, and therefore call for methodological sensitivity to 'web spheres' created by hyperlinking (see Beaulieu 2005, Schneider and Foot 2004, 2005). No matter the specific method chosen, appreciating online interaction as a cultural text means a sensitivity to connections.

The 'online' and the 'offline' are connected, just as 'place' and 'text' are connected. Neither of these sets have to be mutually exclusive. For instance, it might be theoretically and methodologically useful to treat the online cultures studied as a 'place', even while acknowledging the 'place' we're studying is producing and responding to cultural 'texts'. In this understanding, the offline and the online are bridged, even when studying a single site. My research on *Fallout* took such an approach. I investigated as if I was in a subcultural place, but I did so acknowledging the discourse there would incorporate and reflect cultural texts. I might have bound my site too narrowly; investigating a single *Fallout* interest site rather than multiple sites, investigating only those sites instead of other sources of data. I might have made claims about a 'place' without fully immersing myself in that 'place'. But I always appreciated that the place I was studying was interplaying with broader cultural texts.

The place/text dyad is largely determined by how the researcher constructs the project: what issues are pertinent, what questions are asked, what claims are made. So we should be *reflexive* in those choices. We should think through their methodological implications, questioning their core assumptions, problematizing their unstated values. Reflexivity is the process of analyzing self and data in concert. It's important because how research is conceptualized has implications for analysis and findings. Constructing a site or network as a 'place' means the researcher might foreground interpersonal relationships, or the relationships between subjects and social structures. It might mean emphasizing the site or network as self-contained or distinct from broader social discourses, even if relationships to broader discourses are appreciated.

Constructing a site or network as a 'text' means the researcher might foreground discourses or arguments, favouring 'social perspectives' instead of 'subject positions'. It might mean emphasizing the site or network as interrelated with broader social discourses, or an exemplar of them. My research on *Fallout* tried to balance both: it studied a place ethnographically, while discursively analyzing texts. This goal was not problematic in and of itself, but should have been approached

reflexively, to ensure my methods matched my claims.

Ethics. The stance a researcher takes in the 'place/text' continuum has ethical dimensions. A critical personal reflection on the ethical implications of methods is more important than a 'right' or 'wrong' answer. This is why the Association of Internet Researchers Ethics White Paper emphasizes the personal responsibility of the researcher in deciding how to construct and intervene into research environments (Ess 2002). However, this does not mean the ethical dimensions of these discussions should not be publically reflected on, or even debated. It is in this reflection and debate we come to make our own ethical stance. This is what I hope to do here.

One prevalent issue in the study of cultures online maps well onto the 'place/text' dyad. Questions of what is 'private' and what is 'public' in communication online are closely related to how we frame the sites we study. If discourse online occurs in a bounded place, it might be given the same ethical esteem of private communication. If discourse online is published text, then it might be subject to the same analysis as public communication. There are implications here for how data is privileged, whose consent is sought, and even whether university Institutional Review Boards (IRBs, those interdepartmental committees that assess the potential harm to 'human subjects' during research) must be consulted during research design.

Gajjala (2002, 182) argues 'ideas of private/public, closed and open spaces are blurred and reconfigured' when looking at online interaction. The complication comes from the ambiguous nature of communication online. As Garcia et al. (2002, 73) claim, 'the boundaries between public and private "spaces" are drawn differently in online locations than they would be in comparable offline spaces'. In offline conversations, it's often hard to be unintentionally 'public' with discourse intended to be private. Hushed conversations in public spaces might be overheard, but without media, their transmission ends at word of mouth. Even with other media, the implications aren't quite so far-reaching or fast. In online interaction, things are more ambiguous for a few reasons. First, anything said might be more readily stored and replicated. An angry email from a CEO or ex-lover might be transmitted to thousands and thousands without any consent or even awareness from the author. While this replicability was not impossible before the internet, its speed and scope are increased by technological affordances.

Next, the audience of online discourse is not always readily evident. A quick look around a party might reveal who's in earshot and who's likely to transmit a message. A letter or a telephone call is mostly addressed to a specific audience

member. The potential for these messages to reach beyond their intended audiences is relatively limited- excepting rare circumstances like wiretaps. However, online interaction often comes with scores of 'lurkers': those that read online interaction without posting themselves. Those invisible participants are not always considered when people post to forums, comments sections, or profiles. Further, audiences of messages might be inaccurately constructed during online interaction. A post meant for a specific audience might be hyperlinked to from another and the communicator might suddenly have a comment intended to be 'private' interpreted by those they never imagined.

Those seeing online interaction as 'text' might be more inclined to view the interaction that occurs therein as 'public discourse'. This is especially true if the site studied requires no password to access, or comes with no explicit distinctions of secrecy. They might also defend a decision to merely lurk when researching. Denzin (1999) takes this position. Walther (2002) argues discourse on *public* sites is produced inherently for public audiences. Researchers should be included as potential audience members. I took this position in my *Fallout* research, silently analyzing community norms, subcultural ideals, and poster perspectives. I framed my research as one of public texts.

Those seeing online interaction

as 'place' might argue participants in a communal setting are more than a series of published texts and therefore are entitled to more protections than one would give public discourse such as a newspaper clipping or Presidential address. Hine (2000, 23) says 'arguing that online interactions are sufficiently real to provide a context for an ethnographic study has an ethical corollary: online interactions are sufficiently real for participants to feel they have been harmed or their privacy infringed by researchers'. Rutter and Smith (2005) have strong opinions on the 'publicness' of online discourse. They claim that even on sites of 'public' discourse, not all of that discourse is meant to be public, and that not all those posting there intend it to be public, or imagine it being the subject of social research. Further, 'even if we accept the discourse of online interaction as public, what right does that give us as researchers to appropriate that talk and do with it what we will?' (Rutter and Smith 2005, 90).

This is not a tension easily resolved. For instance, Carter (2005, 152) lists a few criteria for ethically studying cultures: non-maleficence, protection of anonymity, confidentiality of the data, and obtaining informed consent. Of those four, 'informed consent' is sacrificed by framing online interaction as text to be observed, but only informed consent. Furthermore, is informed consent even ethnically necessary

on discourse that's public anyway? Informed consent might be even less relevant in many online contexts given the prevalence of pseudonyms and transitory membership. It might be a secondary concern, relegated to a more primary ethical investment in participant wellbeing. Under this perspective, informed consent would only to be an issue when there's need to protect from unnecessary intrusiveness or coercive manipulation.

These ethical questions are ultimately tied to how we frame the cultures we're exploring. A 'text' emphasis might mean the necessity for minimal intervention of any kind with those producing those texts. This perspective might be a good fit for those who want to emphasize things like the natural flow of social discourses, or how members of a culture publically articulate perspectives and roles. However, this emphasis might also mean claims made from the study of those 'texts' must be kept to the realm of the public and discursive. It means extra steps on the part of the researcher to ensure the artefacts studied are indeed conceived of as public, published, and as relatively static representatives broader cultural discourses. Conversely, a conceptualization of online cultures as 'places' might mean the necessity of direct interaction with those creating and participating in that culture. This means claims from the study of those 'places' can be more

'rounded' than those that take a textual perspective. However, this perspective would have to be sensitive to a classic ethnographic trade-off: sacrificing 'generalizability' for 'situatedness'. It also means extra steps on the part of the researcher to ensure participants in the 'place' studied are not being harmed or taken advantage of.

For my research on *Fallout* my lack of reflexivity meant I jumbled the place/text dyad, leading to inconsistencies with ethical ramifications. For the ease of research, I framed the official *Fallout* forum as a 'text' to be analyzed discursively. However, as I approached the 'field', I did so using a spatial metaphor. This meant that I wasn't looking for public perspectives related to broad social discourses. Instead, I was building up paper figures of 'subjects'; assigning personality traits, values, and motivations. And while discourse analysis can certainly serve as 'ideology analysis' when the cognitive elements of discourse are emphasized (see van Dijk 1995), I constructed a community of 'selves' during my analysis of the forum, which wasn't triangulated by cognitive interpretation, ethnographic interaction, or qualitative interview. Markham (2008) was right to warn of interpreting the other as text, but I might have been guilty of the opposite: reading texts and constructing a fictionalized 'other' without sufficient depth to do so. My stance as an observer was also cul-

pable here, which leads to the next section.

Participant/Observer

The dyad. Very closely tied to our conceptions of the interaction we study are our conceptions of the researcher's role in the study. This section will highlight another prominent tension when studying cultures online. The essential question is this: when we engage with cultures online, should we engage as 'participants' or engage as 'observers'? Of course such a question is not unique to cultures online, but the ability to frame just what were studying so freely means that the question here is especially complicated and especially consequential. As Garcia et al. (2009, 58) argue, 'while in the offline world, observation requires at least the minimal participation of "being there," many online settings provide the opportunity for completely unobtrusive observation', and therefore might mean the potential for doing 'ethnography' without ever interacting with the individuals being studied. While perspectives from the last section might influence perspectives taken here, this is not a given. A 'place' emphasis might naturally work with a 'participant' role, and a 'text' emphasis might work with an 'observer' role. However, these perspectives can interact in multiple ways.

Much like those who argue for participation in the study of cultures more broadly, those arguing for participation in the study of cultures online claim observation only gets to part of the cultural context important to a researcher. Text can only be part of the story. Markham (1998, 25) reflects on her realization that she must shift from observer to participant during her analysis of online interaction:

These case studies were designed to allow me to answer one research question across three situations: 'How do people make sense of the concept of reality in or through online interaction?' So it began. And after several painstaking weeks of trying to write the first analysis of metaphors, I realized something was missing. Now, three months later, I realize I was missing. I was surprisingly absent from my own study, which I now realize is an ethnography. I was beginning to understand that cyberspace is not simply a collection of texts to analyze; rather it is an evolving cultural context of immense magnitude and complex scope.

To Markham, the move from understanding what happens online as 'text' to understanding it as 'cultural context' necessitates participation over observation. Likewise Hine (2000, 23) says ethnographic engagement requires a move from passive observation to active participation, because the shift 'allows for a deeper sense of understanding of meaning creation'. The ethno-

graphic perspective sees observation as supplemental to participation when studying cultures. Boellstorff's (2008) research on *Second Life* dips into blogs and forums on the virtual space, but he foregrounds participation. In ethnographies of cultures online, many authors advocate for moving from 'observer' to 'participant' as the field site is increasingly understood (e.g., Orgad 2005, Hughey 2008).

The discourse-analytic perspective, perhaps because of its emphasis on texts, does not problematize the role of 'pure observer' the way the ethnographic perspective does. Dong (2009) pulls discourse from forum threads to analyze without mentioning any ethical need to do more than collect public discourse. Mautner's (2005) argument for the use of 'web-based corpora' in discourse analysis focuses on a gamut of methodological and ethical questions: how to trust authorship online, what cross-cultural interaction online means for research, how to manage the wealth of data afforded by studying discourse online, how to arrange and interpret data in non-imposing ways. What is absent is a discussion of whether the discourse analyst should be merely observing online interaction, and analyzing it as one would a traditional text. Lemke's (2002) discussion of 'hypermodality' in online discourse tells researchers to be mindful of how hyperlinking and multimodality in discourse online mean method-

ological opportunities and pitfalls. Again, the underlying premise is the *observation of texts*.

Of course, differences between discourse analysis and ethnography exist beyond the internet. Discourse-analysis emphasizes a corpus over a field. It sees discourses as more stable and 'textual'. It predominantly focuses on those available for analysis as public and published artifacts. It also might define its data more narrowly in order to provide intricate depth of a discourse over broad statements on a culture. So when van Dijk (2009) does an analysis of a petition from a right-leaning think-tank, he cites the think-tank's website as the source of the petition, but is not concerned with whether there are interactive norms on the rest of the site, or even what other discourses occur on the site. His goal is the analysis of a single text as it's tied to macro-level arguments. When taking a discursive perspective, participating might be an unnecessary methodological choice. After all, the researcher here is analyzing texts to glean perspectives on cultural representation. If the goal is to observe the micro-level discourses that fuel macro-level cultural phenomena, then analyzing those discourses is a sufficient method. It allows a more narrow and purposeful methodical focus than broader and more general ethnographic participant-observation.

Reflecting on my *Fallout* research, a purely-observational

method fits my goals of understanding culture through discourse. I had specific communicative questions about specific social roles. However I could have been more sensitive to the limitations of an observational position. I asked how fans and producers 'negotiated' and 'constructed' their relationships, as well as how fans 'envisioned' their contribution to *Fallout* 3. In these verbs (particularly 'envision'), I was moving beyond the scope of what I could learn by purely observing discourse. Likewise, when I categorized types of 'roles' fans had toward producers- managerial, adversarial, cynical, or deferential- I bordered on making claims about the posters instead of just the posts they made. I might have inaccurately characterized something dynamic as something stable. Even if my methods fit my goals, I could have matched my questions and claims to those methods more appropriately.

No matter the specific strategy, the participation/observation dyad constitutes a conscious choice a researcher must make. The choice doesn't have to be all-or-nothing, of course. Participating doesn't preclude observing, or vice versa. It might even be viewed as a continuum, enacted in different ratios depending on the project or situation. In online contexts, it's theoretically easier to reach the pure observation side of that continuum, making it a weighty choice. I would not go so far as to say that a researcher must always participate in the communication occurring at a research site. However, we should be aware of the stakes of how we frame an online investigation. The affordance for pure observation might create the illusion of a stable text, hiding a dynamic and even fractured collective of perspectives and opinions, hence Markham's (2008, 251) concern for 'interpreting the other as text'. By contrast, emphasizing participation might demand the researcher take a more situated and partisan role in the research process, since distance does add some perspective. These decisions, of course, have ethical ramifications.

Ethics. The ethical dimensions of this question are primarily related to how involved researchers should be in the community studied, and how transparent they should be about their research. Those skeptical about mere observation seem to be concerned with the inauthenticity of doing nothing but observing a culture. Garcia et al. (2009, 60) are direct in their criticism:

> Lurking, first, if allowed by the site and the IRB, is acceptable if that is how participants in that setting routinely participate. If not, ethnographers will get a more authentic experience of an online setting if they jump straight into participation.

This fear of inauthenticity illustrates that questions of participation

are often seen as ethical questions. The fear is that 'mere observation', written up as holistic observations of cultures online, equates to deception. 'Covert researchers'- to use Murty's (2008) term- might be essentially lying about any conclusions they make because they are in effect unqualified to make them.

The ethical problem with 'merely observing' is not as much that representations will be wrong without participating, it is more that these representations will be less authentic. The researcher will claim to understand a culture without interacting in that culture and appreciating the nuance and even fracture beneath the seemingly-stable surface. This is why discourse analysis has generally studied 'talk' and 'text', while ethnography has traditionally represented 'participants' or 'informants'. These categories become muddled online, leading to unique ethical problems.

These ethical problems are still open questions. For instance, many researchers of cultures online who are adamant about participating in the contexts being studied are more ambivalent about the ethical need for transparency during this participation. Soukup (1999) participates in chatrooms without offering informed consent or declaring research interests, citing the public nature of chatrooms as cause for participating without disclosing. Shoham (2004) mentions moving from pure observation to participation, but does not mention any disclosure or consent from 'participants'. Kozinets (2006) speaks of the value of naturally occurring focus groups, but sees no need to inform those groups they're participating in market research. Reasons for these counterintuitive positions often have to do with the difficulty of obtaining consent in a fluid online community, the built-in protection of pseudonymity that often occurs online, or even the public nature of the discourse found there.

Hine's (2000) position- that extending the label of 'community' or 'agent' to an individual also means extending the courtesy of transparency- critiques such covert participation. On one level, it is more difficult to justify being covert when the researcher is engaging in direct interaction that would not occur if the researcher were not present in the field. Transparency is especially important if the researcher plans to quote a participant or reproduce private comments. Observing and reporting without participant's knowledge might easily be seen as a violation of trust. However, just as getting informed consent from a public 'crowd' offline isn't always feasible or necessary, a case can be made for the lack of need, provided that potential harm or additional exposure is not coming from the interaction.

One thing does seem to be agreed upon by most doing cultural research online: the need for researcher reflexivity. Even if we

are not interacting during research, we are never merely observing. Cultural research of any kind demands some form of consequential cultural participation. The researcher might be a cultural 'insider' who already identifies with the culture studied. The researcher might be a cultural 'outsider' who comes from a different perspective and must get acquainted with the norms and language of the environment studied before any observations can be dependably made. The researcher may exist at any point along that continuum. What a researcher may not do is trust objective impartiality during detached observation. Even van Dijk (2009), who sees pure observation as a viable method, argues no observation is ever-value free. Markham (1998, 260) argues the point eloquently:

> Frankly, whether or not the researcher participates or simply observes, the construction of the research report will present a particular reality of the object of analysis that is influenced by the identity and participation of the researcher. It may be more productive to acknowledge one's participative role early, so that every aspect of the research design can effectively incorporate the researcher's presence in the construction of the field under study.

This argument applies to my work with *Fallout*. I can more easily justify my nonparticipation in the interac-

tion I studied, than I can justify my lack of critical reflection about my own position. As I studied the discourse between fans and producers, I was much more partisan than my publications let on. I was a fan of the game with a critical disposition toward the producers of the game. I buried this personal criticism under academic criticism. What perspective might have been gained by keeping this cultural participation in the front of my mind during my analysis? What nuance might I have added by reflexively checking and rechecking it against my analysis and writing? Even without ever starting a thread or posting a word, I was a participant in the culture I studied.

While I believe such reflexivity is essential for anyone studying any culture- online or off, I also believe this reflexivity can occur whether the researcher is 'directly' participating or 'merely' observing. A discourse-analytic position is ideal for researchers interested in letting the discourse 'unfold' as it may, without researcher intervention or guidance. It fits with notions of critical distance and naturalistic observation that are not unheard of in qualitative social science (see Silverman 2006). In this sense, it might sometimes be the more ethical methodological decision. Observation appealed to me during my *Fallout* research, since my goal was to let the discourse speak for itself instead of foregrounding my own perspectives in

the research project. However, such a position demands ethical considerations, which I'm now convinced that I haven't been sensitive to in my previous work. I could have been sensitive to my positions without foregrounding them in my analysis. Instead, I mostly shelved them.

If the goal of a project is observation, then the researcher should be sensitive to the public/private tension in online interaction, checking and rechecking data against notions of what's public and what's published. Again, claims made from that data should be limited to only what is evident in that public discourse. Conversely, a researcher coming from a participant standpoint might foreground the interpretive and interactional processes of the researcher in the research process. This position might be ideal for researchers interested in participating in discourses, in drawing those discourses out as they themselves move through a culture. This position would be appealing to those who want to work with participants to elicit the often-unstated assumptions of practicing a culture. However, this perspective carries with it ethical burdens as well. If the goal is participation, then the researcher should be sensitive to just how much of the research project is foregrounding the frames of the researcher, instead of the perspectives of participants. How close is 'drawing out' to 'writing in'? Of course, we might ask whether this

is this any more of a danger when participating than when observing. This is why the first answer to the question of how we engage with the cultures we study is most fundamentally reflexivity.

A Final Evaluation

Thinking back to what birthed this budding crisis, I appreciate Markham's (2008, 272) reflections on the power and responsibility that comes with cultural research: 'our capacity to represent cultural knowledge is a great responsibility, with many traps and difficulties. But it is also a gift, well earned through education, well honed through experience, and well intended through ethical reflexivity'. My cardinal sin has been a lack of reflexivity about what it means to study cultures online. No matter the position a researcher takes on the dyads above, what's important is critical thought on personal positions. When questions of method and ethics can be argued from opposite ends, sensitivity to our own personal positions is essential. Even if easy answers about methods and ethics elude us, the reflective process has value because it gets us asking questions. Markham (1998, 8) reminds us that during research we should ask how we know we're being meaningful and honourable in our methods. She says we don't do this to get any definitive answers, 'but because the honest pursuit of these questions leads me to a fairly honest conclu-

sion- we can never get to the bottom of it, we can never have enough, we can never know it all'. Reflexive methods acknowledge both abilities and limitations.

As far as my positions at this moment of tension, maybe it's not a problem that I treat what I find online as text and choose to observe it at a distance. 'Discourse' is certainly an element of many ethnographic projects- often a pre-eminent one (see Farnell and Graham 1998). However, discourse-analytic approaches to online interaction don't approach discourse in the same way. They often see a corpus of 'texts' more than a 'place'. They often 'observe' talk and text instead of 'participate' in it. This means the questions I ask when doing a 'discourse analysis'- and the answers I find- will have to be different than ethnographic questions and answers. If questions emphasize the situated understandings of 'participants' within cultures, or seek to draw out implicit or unstated understandings, then it might make sense to approach them ethnographically. If the questions emphasize public issues, or are concerned with public representations addressed to public audiences, then it might be ethically studied as public discourse.

All this doesn't mean I won't be properly studying cultures online, just that I may not be ethnographically studying cultures online. Markham (2008, 255) comments that ethnography 'seems to be a term that is applied by scholars who do not know what else to call their work'. Maybe the thoughtful declaration that 'I study discourse online' is more methodologically and ethically sound than making claims to ethnographic methods or conclusions, when I haven't conducted ethnography. As Hine (2000, 53-54) argues, 'discourse analytic approaches to internet texts could usefully coexist with ethnographic approaches to internet interaction. This combination could help to maintain analytic ambivalence about what the phenomena being studied *really* are'.

I can reflect now that the problem with my research is that I made claims about culture that were troublesome, given my methods. The crisis was birthed when I claimed to interpret 'text' while treating what I explored as a 'place'. I researched like an 'observer' but reported like a 'participant'. Hine (2005a, 8) says 'when we talk about methodology we are implicitly talking about our identity and the standards by which we wish our work to be judged'. My blindness to the term 'ethnography' might have well been an attempt to frame how the work was judged, while producing the kind of findings that would only fit with an ethnographic encounter of culture. However, after this moment of tension, I'm not prepared to dismiss discourse analytic methods when studying cultures online. They fit my interests as a researcher well. What I will change are the questions I ask

and the claims I make. I now understand that the study of cultures online- like the study of cultures in any context- has many dimensions. Any researcher engaging with cultures must be aware of the methodological and ethical decisions they are making in the process.

References

Baym, Nancy K. 2010. *Personal Connections in the Digital Age*. Cambridge, UK: Polity Press.

Beaulieu, Anne. 2005. Sociable hyperlinks: An ethnographic approach to connectivity. In *Virtual Methods: Issues in Social Research on the Internet,* edited by C. Hine. Oxford, UK: Berg.

Boellstorff, Tom. 2008. *Coming of Age in Second Life: An Anthropologist Explores the Virtually Human.* Princeton, NJ: Princeton University Press.

Carter, Denise. 2005. Living in virtual communities: An ethnography of human relationships in cyberspace. Information, *Communication, & Society* 8 (2):148-167.

Chayko, Mary. 2008. *Portable Communities: The Social Dynamics of Online and Mobile Connectedness.* Albany, NY: SUNY Press.

Denzin, Norman K. 1999. Cybertalk and the method of instances. In *Doing Internet Research: Critical Issues and Methods for Examining the Net,* edited by S. Jones. London: Sage.

Dong, Habin. 2009. Identity discussion: A discourse analysis of the in-group identity differences enacted by one thread of online discussions. *China Media Relations* 5 (2):13-24.

Elliot, Luther. 2004. Goa trance and the practice of community in the age of the internet. *Television & New Media* 5 (3):272-288.

Ess., Charles, and the AoIR ethics working committee. 2002, November 27. *Ethical decision-making and internet research: Recommendations from the AoIR ethics working comittee.* Approved by the AoIR, November 27, 2002. (September 26), http://www.aoir.org/reports/ethics.pdf.

Farnell, Brenda, and Laura R. Graham. 1998. Discourse-centered methods. In *Handbook of Methods in Cultural Anthropology*, edited by H. R. Bernard. Thousand Oaks, CA: Altamira Press.

Fairclough, Norman. 1989. Language and Power. London: Longman.
_____. 2003. Analysing Discourse: *Textual Analysis for Social Research.* London: Routledge.

Gajjala, Radhika. 2002. An interrupted postcolonial/feminist cyberethnography: Complicity and resistance in the 'cyberfield'. *Feminist Media Studies* 2 (2):177-193.

Garcia, Angela Cora, Alecea I. Standlee, Jennifer Bechkoff, and Yan Cui. 2009. Ethnographic ap-

proaches to the internet and computer-mediated communication. *Journal of Contemporary Ethnography* 38 (1):52-84.

Geertz, Clifford. 1973. *The Interpretation of Cultures: Selected Essays.* New York: Basic Books.

Herring, Susan C. 2001. Computer-mediated discourse. In *The Handbook of Discourse Analysis*, edited by D. Schiffrin, D. Tannen and H. E. Hamilton. Malden, MA: Blackwell.

Hine, Christine. 2000. *Virtual Ethnography.* London: Sage.

_____. 2005a. Virtual methods and the sociology of cyber-social-scientific knowledge. In *Virtual Methods: Issues in Social Research on the Internet*, edited by C. Hine. Oxford, UK: Burg.

_____, ed. 2005b. *Virtual Methods: Issues in Social Research on the Internet.* Oxford, UK: Berg.

Hughey, Matthew W. 2008. Virtual (Br) others and (Re)sisters: Authentic black fraternity and sorority identity on the internet. *Journal of Contemporary Ethnography* 37 (5):528-560.

Ito, Mizuko, et al. 2010. Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media. Cambridge, MA: The MIT Press.

Jones, Steve, ed. 1999. *Doing Internet Research: Critical Issues and Methods for Examining the Net.* London: Sage.

Kendall, Lori. 2002. *Hanging Out in the Virtual Pub: Masculinities and Relationships Online.* Berkley, CA: University of California Press.

Kozinets, Robert V. 2006. Click to connect: Netnography and tribal advertising. *Journal of Advertising Research* 46 (3):279-288.

Lemke, Jay L. 2002. Travels in hypermodality. *Visual Communication* 1 (3):299-325.

Lévy, Pierre. 1997. *Collective Intelligence: Mankind's Emerging World in Cyberspace*. New York: Plenum Trade.

Markham, Annette. 1998. *Life Online: Researching Real Experience in Virtual Space.* Walnut Creek, CA: AltaMira Press.

_____. 2008. The methods, politics, and ethics of representation in online ethnography. In *Collecting and Interpreting Qualitative Materials*, edited by N. K. Denzin and Y. S. Lincoln. Thousand Oaks, CA: Sage.

Markham, Annette, and Nancy K. Baym, eds. 2009. *Internet Inquiry: Conversations about Method*. Los Angeles: Sage.

Mautner, G. (2005). Time to get wired: Using web-based corpora in *Critial Discourse Analysis. Discourse & Society*, 16(6), 809-828.

Miller, Daniel, and Don Slater. 2000. *The Internet: An Ethnographic Approach.* Oxford, UK: Berg.

Milner, R.M. 2009. Working for the text: Fan labor and the new organization. *International Journal of Cultural Studies* 12 (5):491-508.

_____. 2010. Negotiating text integrity: An analysis of fan-producer interaction in an era of digital connectivity. *Information, Communication, & Society* 13 (5):722-746.

_____. 2011. Discourses on text integrity: Information and interpretation in the contested *Fallout* knowledge community. *Convergence: The International Journal of Research into New Media Technologies* 17 (2):159-176.

Murty, Dhiraj. 2008. Digital ethnography: An examination of the use of new technologies for social research. *Sociology* 42 (5):837-855.

Orgad, Shani. 2005. From online to offline and back: Moving from online to offline relationships with research participants. In *Virtual Methods: Issues in Social Research on the Internet*, edited by C. Hine. Oxford, UK: Berg.

_____. 2009. How can researchers make sense of the issues involved in collecting and interpreting online and offline data? In *Internet Inquiry: Conversations about Method*, edited by A. Markham and N. K. Baym. Thousand Oaks, CA: Sage.

Rutter, Jason, and Gregory W. H. Smith. 2005. Ethnographic presence in a nebulous setting. In *Virtual Methods: Issues in Social Research on the Internet*, edited by C. Hine. Oxford, UK: Berg.

Schneider, Steven M., and Kirsten A. Foot. 2004. The web as an object of study. *New Media & Society* 6 (1):114-122.

_____. 2005. Web sphere analysis: An approach to studying online action. In *Virtual Methods: Issues in Social Research*, edited by C. Hine. Oxford, UK: Berg.

Shoham, Aviv. 2004. Flow experiences and image making: An online chat-room ethnography. *Psychology & Marketing* 21 (10):855-882.

Silverman, David. 2006. *Interpreting Qualitative Data: Methods for Analyzing Talk, Text, and Interaction. 3 ed.* Los Angeles: Sage.

Soukup, Charles. 1999. The genered interactional patterns of computer-mediated chatrooms: A critical ethnographic study. *The Information Society* 15 (3):161-176.

Steinkuehler, Constance, and Dmitri Williams. 2006. Where everybody knows your (screen) name: Online games as 'third places'. *Journal of Computer-Mediated Communication* (4), http://jcmc.indiana.edu/vol11/issue4/steinkuehler.html.

Taylor, T.L. 2006. *Play between Worlds: Exploring Online Game Culture.* Cambridge, MA: MIT Press.

Tracy, Karen. 2001. Discourse analysis in communication. In *The Handbook of Discourse Analysis*, edited by D. Schiffrin, D. Tannen and H. E. Hamilton. Malden, MA: Blackwell Publishers, Ltd.

Van Dijk, Teun A. 1995. Discourse analysis as ideology analysis. In *Language and Peace*, edited by C. Schaffner and A. L. Wenden. Amsterdam: HAP.

————. 1997. The study of discourse. In *Discourse as Structures and Processes*, edited by T. A. van Dijk. London: Sage.

————. 2009. Critical discourse studies: A sociocognitive approach. In *Methods of Critical Discourse Analysis*, edited by R. Wodak and M. Meyer. Los Angeles: Sage.

Walther, Joseph B. 2002. Research ethics in internet-enabled research: Human subjects issues and methodological myopia. *Ethics and Information Technology* (3), http://www.nyu.edu/projects/nissenbaum/ethics_wal_full.html.

Wellman, Barry, and Caroline Haythornthwaite, eds. 2002. *The Internet in Everyday Life*.

Williams, Dmitri, Nicolas Ducheneaut, Li Xiong, Yuanyuan Zhang, Nick Yee, and Eric Nickell. 2006. From tree house to barracks: The social life of guilds in World of Warcraft. *Games and Culture* 1 (4):338-361.

An alternative conceptual framework for studying everyday offline and online photographic practices on Flickr

Eve Forrest

As digital cameras and smart phones are bought and used in increasing numbers, millions are now using online photography sites to upload and share their own images with others. One popular site to do this is Flickr which is fundamentally changing the way personal, everyday photography practices are being conducted on a global scale and increasingly allowing online and offline worlds to become intertwined. This article proposes that in order to better understand these new entanglements, an alternative approach to researching visual practices is required. Rather than simply analysing the content of sites like Flickr, a more interesting approach can be adopted by examining offline and online photographic practices from a non-visual perspective. This paper outlines an alternative conceptual framework, incorporating ideas from phenomenological philosophy and Non-Representational Theory (NRT), to consider the many ways that various sensory elements combine to make photography a thoroughly embodied and fundamentally corporeal practice. It proposes a methodological strategy to study participants' photographic habits, both when they visit and navigate around Flickr and explore offline environments with their camera.

Keywords: Flickr, photographic practices, places, phenomenology

Introduction

Everywhere you go, people are taking photographs and the everyday use of 'visual technology has been and continued to be noticeably transformed' in the 21st Century (Graham et al 2011, 87). Most of us now carry a camera in some form: either on a mobile phone or a portable 'point and shoot' camera. Thanks to numerous photo sharing platforms and the mobile internet we can also publish our images within minutes of taking them on our phone, or later upload them to different places online via a computer. Photography centred spaces such as SmugMug, Photobucket and *Flickr*, are becoming increasingly popular destinations for our images; it is the latter that this research will discuss here.[1]. Palmer recognises the importance of these sites stating that 'the emergence of online photo-sharing platforms in particular – demand a rethinking of dominant theo-

ries of personal photography' (2010, 158).

Although the practice of personal photography has never been more popular, academic research from a sociological, media and visual studies context has mostly neglected personal photography practices (Rose 2004; Shove et al 2007). Van House (2011, 125) recently observed that 'understanding the actual 'doing' of photography is critical… yet there remains a relative lack of ethnographically informed research on people's actual, daily practices of photography' with Larsen adding that 'photographing is absent from most theory and research jumps straight from photography to photographs' (2008, 143). The research that has been most recently conducted into online photography practices has instead been from the perspective of human computer interaction (HCI), which is more interested in learning the specific technological aspects of user engagement with online platforms and increasing the potential of that interface, rather than reflecting on the behaviour and experiences of using sites such as *Flickr*[2].

With these issues and changes in mind, this paper offers an alternative conceptual framework as a way of rethinking photographic practices both offline, in everyday environments, as well as online, specifically on *Flickr*. This approach has three key starting points. First, it believes that photography is a practice that engages the entire body, not just the visual sense. Second, it believes that thus far, the academy has put too much emphasis on photographs and images, where instead the focus should equally be on the practices and 'doings' of photography. Finally, the sensory aspects of visual practices have often been ignored in favour of a more distant approach. To address these issues directly, this piece will outline alternative conceptual approaches to photography, both online and offline, with the hope of widening discussions on everyday practice. The first approach will use phenomenology, and more specifically incorporate parts of Merleau-Ponty's work on perception and embodiment to connect with discussions to the body and technology. Secondly, the paper will focus on the usefulness of Non-Representational Theory (NRT) relating to elements within everyday visual practices. Both parts will incorporate discussions on the important sensory issues relating to photography (Pink 2009, 2011). Finally, this piece will briefly suggest ways in which this conceptual framework could be applied in the field via specific ethnographic investigations. However in order to contextualise later discussions about online and offline places, this essay will begin with a brief discussion on place and how these theories connect with activity on *Flickr*.

Online and Offline places

Although place is a simple word it is notoriously difficult to define, however there has been no shortage of attempts to understand what place means across many diverse academic disciplines (Cresswell 2004, 2008). Place is also tied in with ideas of space and time, both equally complex areas that have divided opinion between geographers, sociologists and urban theorists alike. From a Marxist point of view, space is a 'site of struggle not a passive geometry' (Urry 2004:11) where the stretching and disconnection between of space and time have been crucial of for the advancement of the modernity juggernaut (Giddens 1991). However geographer Doreen Massey (1994) specified that the meaning of place is not always fixed, and 'the global' in the context of local places is vital to our understanding of how they are lived in. It is this lived quality of places that appeals to the other more humanistic strands of geography (Relph 1976) which, in the words of Seamon and Sowers, emphasised that 'regardless of the historical time or the geographical, technological, and social situation, people will always need place because having and identifying with place are integral to what and who we are as human beings' (2008, 49). This is also picked up in the work of Tim Ingold whose work analyses, more generally, 'how the use of lines and the making of routes are implicated in the making of place' (Pink 2008,179).

Whilst some are convinced that online places are somehow inauthentic (Gieryn 2000) because they do not occupy a *physical* space, there is another argument which instead advances the idea that 'particular media environments have become meaningful places' in their own right (Moores & Metykova 2010, 185). Miller and Slater (2000) sought to rethink notions of online and offline place within their ethnographic study of internet use in Trinidad. From this they 'questioned the assumptions of the virtual and the everyday or material as distinct realms' (Lister et al 2003, 221). Later studies of online interactions highlight the many ties that bind online and offline places (Kendall 1999, 2002). I believe that places are personal, but created and brought to life through habit. They are more than simply lived in; places are complex, unique yet ubiquitous and a vital part of our everyday routine, in essence 'place is when space feels thoroughly familiar' (Tuan 1977, 6).

If places are 'never finished but always the result of processes and practices' (Cresswell 2004, 37), then Flickr (and other sites online) can be conceived as such because they are visited in a regular, habitual way by users who know their way around them intimately. I acknowledge that online and offline places are experienced in different ways by users, indeed this piece is not saying that walking around an urban

backstreet is the same as accessing the same place on *Flickr*. However there are parts of the online and offline experience that cross over, such as the exploration of unknown places and the creation of familiar paths. With these ideas in mind, this piece will now turn to phenomenology, technology and experience in relation to the first part of my conceptual framework.

Phenomenology, technology and body

Seamon and Sowers summarise phenomenology as 'the interpretive study of human experience. The aim is to examine and to clarify human situations, events, meanings, and experiences as they are known in everyday life but typically unnoticed beneath the level of conscious awareness…seeking out what is obvious but unquestioned and thereby questioning it' (2008, 43).The work relating broadly to the canon of phenomenological philosophy is very wide (Glendinning 2007), so I will only be talking specifically here about Merleau-Ponty and focus on perception, embodiment and technology. Merleau-Ponty believed that 'perception may be materially extended through the "body" of an artefact and that perceptual extension is not limited by the outline of my body or the surface of my skin' (Ihde 1990, 40). As an example of this he used (the now frequently cited) blind man's cane which 'has ceased to be an object for him and no longer

perceived for itself; its point has become an area of sensitivity extending the scope and radius of touch and providing a parallel to sight' (Merleau-Ponty cited in ibid).

Later still he extended these discussions to the work of Cezanne and believed that in the act of painting, 'that body… is an intertwining of vision and movement' (Merleau-Ponty cited in Baldwin 2004, 294). By taking a picture, the photographer becomes a part of their everyday surroundings and their 'photographs intrude on, and become part of, [the photographers] everyday perception' (Wright 1992, 28). Using a camera is akin to 'working a lasso, like playing a musical instrument, is pure movement or flow…it involves an embodied skill, acquired through much practice… the agents attention is fully absorbed in the action' (Ingold 2000, 414). The practice of photography in terms of Merleau-Ponty's philosophy, switches from 'a way of seeing to a specific mode of *being (a seeing –with)*' (my emphasis, ibid) which develops a different kind 'of sensory engagement with the environment' (ibid, 262) and between the camera and body there comes a new 'coordination of perception and action' (ibid, 353).

The practice of photography is thoroughly corporeal and involves the body at all times: whether you are taking the pictures, or posing in front of the camera, carrying equipment, shouting directions to subjects or later uploading photo-

graphs online, fiddling with buttons, screen settings and scrolling via the computer mouse or touchpad. Photography is a practice based in, and produced through, movement (Pink 2011).[3] It does, of course, incorporate the visual, but it is also *tactile*, and there are many physical elements that add to the mixture of the overall experience of doing photography. 'We learn, Merleau-Ponty argues, not by thinking about things but by doing them' (Crossley 2001, 128). The complex relationship between human and machine and the interactions that lie therein is also of interest to phenomenological philosophy. Crossley explains that our knowledge of the world extends beyond our own bodies, and empties into the various spaces we occupy so 'I can type [on a keyboard] without having to find the letters one by one... this type of knowledge is a practical, embodied, quite remote and distinct from discursive knowledge... my hands turn [the keyboard] into a space for typing, subordinating it to this human function' (ibid, 122). These ideas surrounding the knowing of technology through the body and hands can be applied more widely to both the tactile and routine practice of doing photography on *Flickr*, where an understanding and navigation of the site is routinely enacted and learned through habitual use.

Sarah Pink believes that too often 'sensory experience was regarded as existing on two levels, tending to separate body and mind… the notion of embodiment… resolved this dichotomy to some extent' (2009,24). The philosophy of Merleau-Ponty is applicable to many areas of this study, from the movements that photographers make with their body and the camera, to their noticing of everyday details and exploring their immediate world. Photographers are immersing themselves not only in the practice of camera work but also their wider everyday environments, whenever they venture out with a camera. It is to these extended ideas of practice and NRT that this paper will now turn.

NRT and the practice(s) of photography

In the context of this paper, NRT relates more generally to 'a social ontology of practice that is an account of social life maintaining that human lives hang together through a mesh of interlocked practices' (Simonsen 2010, 222). NRT was developed as an alternative approach to understanding how individuals interact with the practices and places they inhabit. Nigel Thrift, a key figure in the development of NRT, argues that 'it is about putting the processes into social life in a real way… taking the static out of culture' (Thrift 2010,185). NRT is also interested in exploring the imaginative and unexpected in everyday life or the 'strangeness in the commonplace' (Thrift 2008, 87).

One key element of photographic

practice is about finding the 'strangeness' within the everyday, noticing the unnoticed and bringing it to the attention of others. This also extends to the online environment, bringing these unexpected moments and encounters to the surface for others to view. Thrift believes that images themselves are 'a key element of space' and should be seen as tools as part of the everyday 'practice of seeing' (2003, 100-102). This highlights another useful strand of NRT: its focus on 'practices… through the establishment of corporeal routines and specialized devices… practices are productive concatenations that have been constructed out of all manner of resources and which provide the basic intelligibility of the world' (Thrift 1996,8).Interestingly Schwartz and Ryan extend this argument to photographs, explaining that 'to explore photography and the geographical imagination is to understand how photographs were and continue to be, part of the practices and processes by which people come to know the world and situate themselves in space and time' (2003,18). The main focus in visual and photography disciplines has been on the image, or explicitly on photographers as image makers. Tim Ingold goes further stating that within the visual studies oeuvre 'vision has nothing to do with eyesight and everything to do with the perusal of images' (2010, 15). Thrift challenges the domination of the visual saying that 'of course vi-

sual is important but it is only one of the registers through which people sense things and in some cases it clearly is not the most important' (Thrift 2010, 186). There are all sorts of movements, positions and sensations attached to the practice of photography that too often are overlooked. Buse uses the example of the polaroid explaining that 'the [photographic materialists] do not take account of equally 'material' photographic practices where the photo object itself may not be what is most important as in the case of the process of Polaroid image-making' (Buse 2010, 203).

Hayden Lorimer eloquently expresses that 'with NRT the focus falls on how life takes shape and gains expression in shared experiences, everyday routines, fleeting encounters, embodied movements… unexceptional interactions and sensuous dispositions (Lorimer 2005, 84). Studying practices online and offline via NRT can offer a richer understanding of how 'representations are apprehended as performative in themselves; as doings' (Dewsbury et al cited in Wylie 2007, 164). The notion of everyday worlds colliding and mixing is of great interest to theorists of NRT where 'new thinking about place and space involves trying to understand the gaps in the rhythms of everyday life through which new performances are able to pass' (Thrift 2003, 1).

NRT can also be applied to *Flickr*, a world that is continually shifting

and being rebuilt through new images, groups and interactions between members.   The worlds of online and offline are not sealed off from one another but are 'always moving and changing and mutating and communicating' (Thrift 2010, 187). Schwartz and Ryan believe that 'to explore photography and the geographical imagination is to understand how photographs were and continue to be, part of the practices and processes by which people come to know the world and situate themselves in space and time' (2003, 18). It is this recognition of movement, practices and every day routines that makes the NRT approach appealing to this research, particularly when joined with the earlier phenomenological discussions.

Taking phenomenological approaches into the field

Having defined a conceptual framework, this section will briefly detail how it might be taken further, moving from theoretical arguments and into the field, and used more widely to study photographic practices online and offline. From a phenomenological point of view, the role of the researcher undertaking work in the field would be to 'step back from any taken-for-granted attitudes and assumptions, whether in the realm of everyday experience or in the realm of conceptual perspectives and explanations' (Seamon and Sowers 2008, 43) in order to

understand them more fully.

Looking at the everyday business of photography and the experiences of photographers would naturally lead to an embodied, multi-sensory based ethnography where a variety of approaches would be used to fully capture what it means to be a photographer in the world. The principal method would be a form of participant observation that would shadow photographers in situ, following them around whilst also incorporating dialogue with them. This technique known as the 'walk and talk' (also known as the 'go along' or 'the guided tour') can be utilised as a way of understanding the different physical aspects of photography as well as 'accessing experiences and interpretations at the same time' (Kusenbach 2003, 463). Walking is a useful ethnographic method because it is 'not simply something we do to get from one place to another, but it is itself a form of engagement integral to our perception of an environment' (Pink et al 2010, 3) and it is an 'activity that creates space to both imagine and experience, at the same time' (Vaughn 2009, 317). Walking and movement are essential to the practice of photography.[4] Through watching participants and taking part in the exploration of urban space it not only reveals previously hidden or taken for granted movements it also helps to give context when extending these ideas further into online places, where photographers move, explore and

wander around.

The move into online territory however poses a unique and complex challenge to the researcher, and navigating the landscape of *Flickr* requires knowledge and understanding about the different interactions present on the site. The answer cannot be found by looking to existing research, as there has not yet been any ethnographic based research relating to *Flickr* and online movement by its users (Van House 2011). In general, there is a need for much more research into online photographic practices, relating to the images themselves but particularly the other online features that allow users to interact with each other and the site in different ways. For example 'previous research has explored how people collaborate around physical photos, however much less is understood about the possibilities provided by the recent emergence of photo-sharing websites' (Miller and Edwards 2007, 1).

To understand more about how members use, relate to and move around *Flickr*, one technique would be to mirror the 'walk and talk' method. The 'browse and talk' allows the researcher and participant to reflectively discuss their actions and movements around *Flickr*, as they interact with the site on a computer. The verbalising of thoughts and feelings as *Flickr*ites navigate around their familiar places on the site allows a fresh perspective on attitudes and patterns of use, finding the ar-

eas of *Flickr* they most often revisit and how they navigate around the site to get to them. Alongside discussions on routine and movement, the different tactile interactions with the computer could also be studied. The researcher should directly observe and question the different interactions as they happen, paying attention to where and how often the participant moves around the site, how they find the images they like and end up on specific pages. Recording discussions via note book and voice recorder would allow for later interrogations of possible routine movements. Maria Bakardjieva highlights this method is not perfect but as 'there is no technical tool for capturing successive [computer] screens...' (2005, 85) a certain amount of improvisation is required by the researcher depending on the surroundings and the participants chosen.

Summary

It seems that 'the internet's institutional-technological framework clearly supports ways of coming together and being together that are unprecedented and that presumably will lay the groundwork for new ways of relating and constituting the human self' (Adams 2005, 178). I believe that the more transient aspects of current computing and digital culture mean that researchers must be more receptive to the ways that the technology is being appropriated and used in everyday life,

through habitual use[5].

This paper has argued for an alternative, sensory based methodological approach when studying the practice of photography that encompasses many diverse paradigms, from the phenomenology of Merleau-Ponty, to the movement of the body during the taking of photographs, to NRT and the everyday interactions within familiar environments. Furthermore these theories can also be extended into the online domain of *Flickr*, as the habitual movements and interactions on this site always have an offline context. By extending discussions about the practice of photography and following where photographers go we can then understand more about the different ways we respond to, inhabit and move around virtual and everyday environments.

Endnotes

[1] There is now an estimated 100 billion photographs uploaded onto Facebook. Source http:// www.pixable.com (accessed 13th September, 2011)

[2] Yahoo (who own Flickr) Berkley research centre gives an idea of the scope and range of different HCI projects. See http://research.yahoo.com/project/

[3] Pink (2011) in a fascinating and innovative article goes onto say how images are also connected to and produced through movement.

[4] Flickr members sometimes meet up socially within their local area in order to take pictures together. These meet ups are specifically structured to include a walk in a predetermined area of interest in the city.

[5] These suggested methods and framework here are currently being put into practice out in the field via a current ethnographic study of Flickrites based in the North East of England, which examines the practice of photography and the connections between online and offline places. The study examines both their habits and everyday movements and routines with the camera, as well as their explorations of Flickr and their everyday urban environments.

References

Adams, P. 2005. *The Boundless Self: Communication in Physical and Virtual Spaces*. New York: Syracuse University Press.

Baldwin, T. 2004. *Maurice Merleau-Ponty: Basic Writings* London: Routledge.

Bakardjieva, M. 2005. *Internet Society.* London: Sage

Buse, P. 2010. 'The Polaroid Image as Photo Object', *Journal of Visual Culture*, 9(2) 189 -207

Cresswell, T. 2004. *Place: a short introduction.* Oxford: Blackwell

Cresswell, T. 2008. *On the Move.* London: Routledge

Crossley, N. 2001. *The Social Body: Habit, Identity and Desire.* London: Sage Publications

Gieryn, T F. 2000. 'A space for place in

sociology', *Annual Review of Sociology*, 2000, (26), 463 – 496

Giddens, A. 1991. *Modernity and Self Identity*, Cambridge: Polity Press

Glendinning, S 2007. I*n the name of phenomenology.* Oxon: Routledge

Graham, C., E. Laurier, V. O'Brianand M.Rouncefield. 2011. 'New Visual Technologies: shifting boundaries, shared moments'. *Visual Studies* (26)2 87-91

Ingold, T. 2000. *The Perception on the Environment.* London, Routledge

Ihde, D. 1990. *Technology and the Lifeworld.* Bloomington, Indiana University Press

Kendall, L. 1999. 'Recontextualising Cyberspace' Jones, S G (Ed) *Doing Internet Research.* London, Sage 57-74

Kendall, L. 2002. *Hanging out in the Virtual Pub* London, University of California Press

Kusenbach, M. 2003. 'Street phenomenology: The go-along as ethnographic research tool', *Ethnography*, 4(3), 455-485

Larsen, J. 2008. 'Practices and Flows of Digital Photography: An Ethnographic Framework', *Mobilities*, 3: 1, 141 — 160

Lister, M., J. Dovey.,S. Giddings, I. Grant and K. Kelly. 2003. *New Media: A critical introduction.* London, Routledge

Lorimer, H. 2005. 'Cultural geography: the busyness of being more than representational', *Progress in Human Geography* 29(1), 83-94

Massey, D. 1994. *Space, Class and Gender*, Cambridge, Polity Press

Miller, A and D. Edwards. 2007. 'Give and Take: A study of consumer photo sharing culture and practice' Paper presented at SIG-CHI 2007 conference, May 3rd, San Jose CA [Online] Available at http://portal.acm.org/citation. cfm?id=1240624.1240682 (Accessed 27th September 2010)

Miller, D and D. Slater. 2000. *The Internet: An ethnographic approach* Oxford, Berg

Moores, S. and M. Metykova. 2010. 'I didn't realize how attached I am': On the environmental experiences of trans-European migrants', *European Journal of Cultural Studies*, 13 (2) 171 – 189

Palmer, D.2010. 'Emotional Archives: Online photo sharing and the cultivation of the self', *Photographies*, 3(2) 155-171

Pink, S. 2008. 'The Urban Tour', *Ethnography*, 9(2), 175 - 196

Pink, S. 2009. *Doing Sensory Ethnography*, London, Sage

Pink S, Hubbard P, O'Neill M and Radley, A, 2010. 'Walking across disciplines: from ethnography to arts practice', *Visual Studies*, 25(1),

1-7

Pink, S 2011. 'Sensory digital photography: rethinking 'moving' and the image', *Visual Studies*, 26(1), 4-13

Relph, E.1976. *Place and Placelessness*, London, Pion

Rose, G. 2004. 'Everyone's cuddled up and it just looks really nice': an emotional geography of some mums and their family photos', *Social and Cultural Geography*, 5(4), December 2004, 549 - 564

Seamon, D and Sowers, J. 2008. 'Introduction to Place and Placelessness' in P. Hubbard, R. Kitchen, & G. Vallentine, (Eds).,*Key Texts in Human Geography*, London: Sage, 43-51

Simonsen, K. 2010. 'Encountering other bodies: Practice, emotion and ethics' in Anderson, B and Harrison, P (eds.) *Taking Place: Non-Representational Theories and Geography,* Farnham, Ashgate 221-241

Schwartz, J and J. Ryan (eds), 2003. I*ntroduction to Picturing Place: Photography and the Geographic Imagination,* London, I.B Taurus, 1-19

Shove, E., M. Watson, M.Hand andJ. Ingram 2007. *The Design of Everyday Life,* Oxford, Berg.

Tuan, YF. 1977. *Space and Place: The perspective of experience.* Minneapolis, University of Minnesota Press.

Thrift, N. 1996. *Spatial Formations* London, Sage.

Thrift, N. 2003. 'Space: the fundamental stuff of geography' in S. Holloway, S. Price and G. Valentine (eds.) *Key Concepts in Geography.* London, Sage 95-107.

Thrift, N. 2008. *Non Representational Theory.* London, Routledge

Thrift, N. 2010. 'The 27th letter: An interview with Nigel Thrift' in B. Anderson and P. Harrison. (eds.) *Taking Place: Non-Representational Theories and Geography* Farnham, Ashgate 183-201

Urry, J. 2004 'The Sociology of Space and Place' in Blau, J (ed) *The Blackwell companion to Sociology*, Oxford, Blackwell Publishing 3-16

Vaughn, L. 2009. 'Walking the line: Affectively understanding and communicating the complexity of place', *The Cartographic Journal,* 46 (4,) 316 – 322.

Van House, N. 2011. 'Personal photography, digital technologies and the uses of the visual', *Visual Studies*, 26 (2), 124 - 134.

Wright, T. 1992. 'Photography: Theories of Realism and Convention' in Edwards, E (ed.) *Anthropology and Photography 1860-1920.* London: Yale University Press, 18-31

Wylie, J. 2007. *Landscape*. Oxon: Routledge.

The Environmental Semiotics of Virtual Worlds: Reading the 'Splash Aquatics' Store in *Second Life*

Joseph Clark

Nature myths have been described in a number of contemporary media texts, both overtly and through connotation. Media like multiuser virtual environments (MUVEs) offer a critical challenge because they at times approach an immersive, felt realism that seems to transcend symbolism itself. Readers of these texts inhabit the space in a more compelling manner (in a phenomenological sense) than one's identification or engagement with a novel or movie. Because of the way this kind of virtual space inhabits a liminal space between real and not-real; material and embodied, yet completely constructed and artificial; it's especially interesting to see how other-than-human life and ecosystems are represented here. A common sight in Second Life is a kind of idyll, a natural-seeming area most often in the form of a forest through which avatars might stroll hand-in-hand or simply gaze upon, much as the 19th-century Romantics sought visual experiences of the Sublime. If we take such texts on their own terms, Nature is valuable and restorative. But the text also reinscribes a binary between "natural" and "civilized" areas, and the spaces are promoted (on search engines) as, primarily, places to relax and unwind. In other words, as a place for human consumption. Resistive readings are possible, and the paper describes several of these based on a close reading of several prominent Second Life constructions, concluding with a formative critical methodology for 'reading' virtual reality.

Keywords: virtual worlds, environment, semiotics, culture studies, visual rhetorics

Introduction

The role played by ideologies about the natural world is a crucial one, as they both shape and reflect our interaction with the biological systems that sustain us. As Bruno Latour (2004) points out, postmodern questions about ontological reality take on an additional urgency when one is dealing with climate change, food supply and environmental justice issues, to mention just a few pressing concerns. Embedded ideologies of Nature have been identified in a number of contemporary media texts, such

as documentary video (DeLuca 1999) and computer games (Opel and Smith 2004). Such texts contain both narrative and symbolic elements that serve to re-inscribe ideologies of Nature, both overtly and implicitly. Popular versions of virtual reality, from computer games to multiuser virtual environments like *Second Life*, offer glimpses into our conscious and unconscious understanding of Nature, including our relationships to natural systems, which finds expression in ecocentric or anthropocentric valuations of elements of the natural world.[1]

Yet, multiuser virtual environments such as *Second Life* (hereinafter 'SL') offer a critical challenge not faced with other media, because the texts they present approach an immersive, felt realism that seems to transcend symbolism itself. Virtual worlds, in which computer graphics are pushed to their maximum extent to depict a believable, ontologically real place, exist in a liminal state between observed-from-without and experienced-from-within; they are in some sense like photographs and movies, in that they are experienced on a screen by a viewer seated in a chair, but they are also designed to draw the user into an immersive engagement that is analogous to the embodied experience of walking through a museum exhibit or nature trail—or the wilderness itself.

Even so, these seemingly real, three-dimensional landscapes filled with plants and trees waving in a digital wind, are but representations that index ideas about what is essentially real in the physical world. Even when an attempt is made to depict components of the (real) natural world with scientific accuracy, these ideas are informed by ideology. These explicit, overt simulacra of virtual worlds may help us unpack our texts to discover what else we are naturalizing in our cultural materials. They may indeed help us to foreground and problematize the chain of signification that tends to remain hidden in such 'real' constructions as parks, museums, and even 'wilderness' (itself a problematic cultural construct).

Virtual Nature, Past and Present

Before one can identify 'virtual nature' it is necessary to explicate the term nature itself, as used in this paper. There is no perfectly clear-cut delineation of the natural world from the human one, and no unproblematic conception of nature itself. As environmental scholars such as William Cronon (1995) and Roderick Nash (2001) have detailed in separate works, the concept of nature has a complex history that has included, at various times:

- a raw, dangerous, uncivilized place;
- an unspoiled realm of the Sublime, untainted by human contact;
- a support system and resource upon which human civilization

is built;
- a place of spiritual restoration and scenic beauty; and
- a place apart from and, ultimately, unknowable from within human culture.

Each of these interrelated conceptions arises from particular human ideologies and cultural milieu, and each has both advantages and disadvantages that can become apparent when the conception is put into practice via human behavior. For example, 'nature-as-resource' can lead to a process of commodification that results in the depletion of critical natural resources, while 'nature-as-aesthetic' can result in a valuation of the scenic appeal of a natural system that ignores the less picturesque but essential elements that make it work. For the purposes of this paper, however, 'nature' will be defined in a fairly simple way: those elements of the material world that are not human-constructed and are visible at the macroscopic level, including plants, animals, bodies of water, and landforms.

In some ways, immersive virtual worlds are not new. In their 2002 essay in Philosophy and Geography, Stewart and Nicholls describe English gardens of the 19th Century as an early manifestation of 'virtual reality.' Unlike orderly geometric gardens, these attempted to simulate wild Nature, though always adding 'improvements' for the human eye through ordered paths, views, and scenes. These orderings reflected then-current Romantic rejections of rationalism embodied in the concept of the Sublime: an almost overwhelming sense of terror, awe, and beauty felt in the presence of grand natural scenery and events. The gardens were also intended to convey a nationalistic and cultural 'Englishness' to the viewer, and were therefore "a complex mingling of the virtual and the real—neither simulacrum nor reality" (Stewart and Nicholls 2002).

Stewart and Nicholls describe the way the English garden arose following the emergence of the 'Grand Tour', a journey that began as a pedagogical tool for self-improvement, but which evolved into an experience of subjective pleasure, through encounter with the Sublime. Among many others, Thoreau justified this form of travel as a reconnection with 'the Wild'; a complex notion that is as much conceptual as it is concrete. According to Stewart and Nicholls, Thoreau described it as a kind of virtual world that can be carried in one's head, even in the middle of a crowded city (Stewart and Nicholls 2002, 90). Travelers experienced the Wild and the Sublime on their journeys and then sought to bring these experiences home, to re-experience these 'natural encounters' through both landscape painting and gardens. A closely related essay by Patin (1999) describes the way visitor areas and tour routes in American national parks tie the

constructed experience of Nature to current political and cultural themes. He finds that park designers use techniques of display not unlike those found in museums to connect natural wonders with American exceptionalism and other nationalistic concerns and values.

These works lay the ground for relating real-world depictions and constructions of Nature to their underlying ideologies. They remind us that people will create landforms, plants, and animals in virtual worlds, too, in ways that tend to depict Nature in a culturally significant manner. They can also be used as a starting point to understanding how a virtual construction, such as a tropical island in SL, might be read by users who are experiencing that island as a subjectively real place, populated by subjectively real people. "Nature" is thus problematized, no matter how "natural" it looks in actual or virtual reality, and can be treated as a kind of rhetoric.

Semiotics of the Visual

Parks, gardens, museums, and their virtual counterparts are dominated by the visual mode of experience, despite the important role of embodiment mentioned earlier. For Jones (2006), they are "virtual worlds of light" because they are primarily experienced through screen technologies. Both he and Book (2003) see this emphasis on the visual as primarily due to limitations in technology that have not yet engaged the

other senses as completely, though they note that it is also rooted in a Western, Cartesian epistemic that valorizes what is perceived visually (Jones 2006, 6). While the visual component is dynamic and always-changing, it is unlike a film because the view is 'random access' as described in the next section. Although the virtual constructions are meant to index three-dimensional spaces, the focus on vision means that the experience is often a series of views and most objects are also designed to be experienced visually. Roland Barthes' work in the semiotics of imagery provides a methodological approach to read these constructions and one of the goals of this analysis is to determine the utility of applying Barthes' semiotics in this context.[2]

In his explication of the way photographic images work, Barthes begins with the notion of the "press photograph", which, like many museological and virtual-world depictions of Nature, is offered as a direct recording of reality, not as 'art' or artifice. Barthes calls it "a message without a code." He argues that this purely denotative, literal 'light drawing' does not *signify* its subject matter (as words do) but is a direct analogue of it (Barthes 1977, 17-18). Again, this foregrounds the assumption that the visual is Truth, and that what is seen is objective. He calls this form of representation "*continuous and uncoded*", as against the discrete and coded na-

ture of language (Barthes 1977, 17). This is not to suggest that there is no cultural code present in images (such as a national flag waving in the wind or a mother nursing a child), but that the visual code operates separately from the uncoded presumption of direct analogy that is experienced first. In a virtual world, this would be the visually presented spaces and objects that one has the impression of moving through and among.

A second level of signification he calls 'connotation': the culturally-derived meanings that are suggested by what is depicted. To a certain degree, Barthes argues, the perceived analogic connection between image and what it depicts is so powerful as to nearly overwhelm any second-order meaning:

> Of all the structures of information, the photograph appears as the only one that is exclusively constituted and occupied by a 'denoted' message, a message that totally exhausts its mode of existence (Barthes 1977, 18).

This is not to say that no further reading of the photograph is possible. Because it is "an object that has been worked on, chosen, constructed, treated according to professional, aesthetic or ideological norms which are so many factors of connotation" its potential for further signification is readily seen (Barthes 1977, 19). Furthermore, the photo-

graph is not simply perceived but is read against a "traditional stock of signs" present in the culture of the reader (Barthes 1977, 19).

Barthes refers to the two ('analogic/denotative' and 'cultural/connotative') as the basis of a "photographic paradox" because there are two messages, the second of which develops not against the coded nature of linguistic denotation but against the realistic imperative of the continuous, uncoded representation of reality that we perceived the photograph to be (Barthes 1977, 19). As a result, the connotation can appear to be grounded in ontological reality as well.

Much like Walter Benjamin, Barthes adds another layer of meaning by asserting that photographs are always accompanied by linguistic captions of some sort. It is clear that such is the case with the labels on museum exhibits or the printed guidebooks that accompany many landscape gardens. Virtual-world environments include 'captions' in the form of descriptions in search results, signage, welcome notices, land titles, and even the titles of objects that appear when the user's cursor hovers over them. As Barthes puts it, the text "loads" the image with meaning, anchoring it and reducing ambiguity (Barthes 1977, 26-17). As Barthes puts it, the text "loads" the image with meaning, anchoring it and reducing ambiguity (Barthes 1977, 26-27).

We can thus consider Barthes'

work as providing three levels of meaning when examining a virtual construction: its 'photorealistic' continuous, uncoded meaning; the culturally coded, connotative meanings attached to visual symbols (e.g. as the image of a polar bear might signify climate change), and textual codings in the ekphrasis.[3] A reading of these three levels can then help unpack the meaning of a given virtual construction. In particular, his notion of uncoded, continuous representation helps us approach the seemingly-real as is found in virtual reality.

In many ways, an environment like SL subscribes to the myth of photorealism described by both Barthes and Sturken & Cartwright (2009). The photograph implies an ontological truth about its referent—that it really existed at some point in time, and that the camera and object were both co-present (Barthes described this as the *punctum*: the poignancy of an image that evokes the fleeting mortality of its subject). SL seems driven by this myth, through continued efforts toward improving the photorealism in the software itself, as well as through user innovations in the development of realistic virtual objects. Though its graphics may seem primitive compared to those of gaming systems, SL continues to strive towards a photorealistic presentation of whatever is being depicted.[4]

In many, if not most cases, SL constructions are simulacra, because the things 'represented' have no real-world referent except in the most general way. For example, housing and shopping areas look much like their often generically constructed real-life counterparts. Yet it is clear that virtual animals can convey the emotional impact of a photograph and evoke a sense of continuous uncoded reality. The most compelling SL animals are fully three-dimensional and include scripted behaviors that can strongly evoke a sense of life and agency, especially when an embedded script makes the virtual animal react to an avatar's presence, or includes random processes that mimic the behavioral variety of a living organism.

While SL is mainly a visual text, it is also a spatial one, apprehended as a more or less real, three-dimensional space—from shopping mall to forest primeval, space station, or mystical elvish realm. This 'felt' spatiality and a kind of random-access navigation (see below) are part of the way SL generates its immersive realism. Due to the way this kind of virtual space surfs a liminal space between real and not-real—material and embodied, yet completely constructed and artificial—it is especially interesting to see how other-than-human life and ecosystems are depicted here.

The need for a certain amount of naturalism is recognized at a foundational level in the software itself, which generates a world of sun and moon, winds, gravity, realistic water,

and even chirping birds. Many of the user-builders (who create most of the islands, cities, objects, and avatars in this world) have gone to great lengths to create photorealistic plants that sway in the wind, or scripted 3-D animals that move and respond to other virtual actors, resulting in a large catalog of 'natural objects' with which to build one's own virtual wildlife refuge, eco-fantasy, or parkland.

Sampling *Second Life*: The 'Splash Aquatics' Store

As stated, the audience's visual field is almost completely unconstrained in SL. This freedom stands in sharp contrast to a film, or even most computer games. With unconstrained camera angles, one can view any scene from any direction and users can even turn on and off various rendered components, reducing the view to its underlying 'wireframe' structure if they desire. In fact, in most locations there is no set narrative sequence or defined 'walkthrough,' making it challenging to identify what Raymond Williams (1974), referring to television viewing, characterizes as the *experiential flow* of the viewer. Is the store experienced as a whole? In parts, over time? As a quick visit? What happens during the visit? What role do other avatars play in the interpretation of what is seen? What real-life distractions (from email alerts to the dinner bell) occur during the consumption of this virtual construc-

tion and provide a kind of frame or context for the experience?

Still, many locations in SL provide a teleportation entry location and pathways for avatars to follow, allowing one to make reasonable assumptions about what constitutes the typical core user experience of a region or parcel of land. Even here, while readers may be guided by pathways, trails, and signage just as in the real world, SL allows one to easily bypass the intended path. The physical path taken by the avatar becomes a kind of counter-reading or counter-narrative. This can be thought of as a kind of resistive rearticulation in the sense that Antonio Gramsci (2009) describes; a way of pushing back against the hegemonic narrative of the ordered pathway. It also calls to mind Henry Jenkins' (2004) argument that readers construct texts themselves rather than passively consuming them.

For these reasons, the description that follows is only one approximation of the experienced text. For this analysis I have selected a prominent location that foregrounds the natural world: the *Splash Aquatics* store on Gooruembalchi, a region in the 'mainland' of SL.[5] Splash Aquatics[6] is owned by a SL builder named Keikou Splash, who, like many SL users, remains anonymous in terms of his real-life identity. His creations - primarily aquatic creatures of all types, all based on real-world animals rather than fantasy models - are some of the bet-

ter-known and respected 'nature works' in SL and frequently appear on islands created by government agencies and environmental NGOs. In this brief reading of the Splash Aquatics store, I describe the continuous 'reality' of the build (Barthes' analogic interpretation), unpack the connotations of the (apparently three-dimensional) image-objects encountered, and identify their textual captions.

To begin, given the store's location within the miscellany and clutter of the SL 'mainland,' most visitors are likely to discover it through the SL search tool and arrive via teleport. This places the avatar on a large wooden deck facing a wall containing a guestbook tool and a photo gallery of satisfied customers with their purchases. From the standpoint of the avatar, one must turn around in order to see the rest of the store, much of which, while out of doors, is highly organized and parceled in the manner of a plant nursery or zoo, laid out along a terraced hillside. To the left, there is a display of fountains, an outdoor movie theatre, and a stairway leading uphill to more displays. To the right, a series of terraces with water features lead uphill to a futuristic glass structure that appears to be the original store building.

The display area to the left is dominated by animated fountains. Some of these are in a highly artificial context, a sterile (one can almost smell the chlorine) rectilinear pool surrounded by wood decking, while others are situated more organically, in a pond that contains rocks and animated koi. One end of this pond is dominated by a natural-looking waterfall that splashes over rocks and generates spray. In stark contrast, the artificial pond is paired with a second, smaller pond that contains miniature radio controlled boats that the user can control—a curious kind of miniature-within-miniature. An outdoor cinema allows the visitor to select and show video clips and still images of real-world undersea life in natural contexts. Presumably, this serves to suggest ways in which the store's products might be deployed in SL. Other than the prominent 'Cinema' label, this section has no explicit ekphrasis.

Beyond the cinema, one ascends a stairway to a series of terraces featuring more fountains, a variety of 'sculpted ponds' (*sculpting* here refers to a method for creating more organic-looking virtual objects), a 'river kit,' and 'sculpted waterfalls.' Many include naturalistic water plants and are stocked with fish. Each water feature is labeled with descriptive signage. Beyond this is a building containing all manner of diving gear that can be purchased and worn by the avatar; everything from colorful sport-diver suits to technical deep-sea equipment, even including dive computers that simulate the monitoring of time, depth, and remaining air. Ekphrasis in this section focuses on details about the

simulated functionality of the technical devices displayed.

The path continues from here, but for the purposes of description we will return to the starting point in order to pick up the other path available to the arriving visitor. Back at the teleportation point, if the avatar turns right, she crosses an arched footbridge over water that contains lily pads and realistic swimming ducks, both available for purchase. As elsewhere, the water is framed by both organic and artificial surrounds (a pond vs. a boardwalk-lined pool, the latter reinforcing an anthropocentric view). The grouping of ducks and water plants suggests a city park more than a wild place, and the visually dominant displays for purchasing ducks and puffins caption the scene.

On the next level up is a highly realistic swimming pool, complete with tiled lining, situated across the path from a 'click to rez' display showing versions of small fountains an water features, of the type one might place in a courtyard, patio, or backyard garden[6]. Up another level, a sign points off towards "scuba, beavers, penguins, seagulls". This trail, which eventually reaches the scuba-gear building described above, takes the user past a naturalistic waterfall (with conveniently placed picnic table) to a walkway that passes half –a–dozen clear hemispheres several meters in diameter, resembling giant snow globes. These are referred to as 'habi-domes' and are each labeled and themed with a different ecological niche: arctic penguins, volcanic mud pots, beaver dams, seagrass beds, soaring seagulls, and an underwater cave.

Returning from the habi-dome trail, the visitor again sees the futuristic and glass-walled structure at the highest point of land on the property. This is much like a traditional store, with shelving and display cases; or perhaps an aquarium store, with its rows of fish tanks. Some of the items are even obviously designed to be placed in a virtual aquarium, such as miniature lighthouses and bubbling treasure chests. One notable item is a 'fish dispenser' that looks like a giant gumball machine. Exiting the store, the avatar can explore an extensive fishing pond area, using virtual tackle to catch scripted fish in one of the more popular game-like fishing systems in SL that reward users with points and prizes.

The last area to be examined here is probably the heart of Splash Aquatics: below a platform where submersible vehicles are available for purchase, a deep-sea exhibition/habitat/vending area lies inside a building that is camouflaged with the same textures used to cover the 'ground' (it is not clear why this is not rendered as a more traditional structure like the aquarium building at the top of the hill). Within, the avatar can walk past informative displays, 'touch-please' tanks,

and aquaria, much like such real-life places as Sea World or the Florida Aquarium. One can click a sign to have her avatar pose inside a huge set of shark jaws, view a small display that explains and criticizes the controversial real-life practice of 'finning' sharks, or examine displays with links to environmental groups that have a presence within SL.

At the end of the hall, a sign invites the user to click it and thereby teleport into a tunnel. This puts the avatar in a glass tube that runs along the floor of a giant undersea display. The habitat is highly detailed, featuring a wide variety of swimming and crawling sea life, as well as coral heads, rock caves, and waving kelp. The display mimics the 'shark encounter' type of spectacular display in real-world aquaria. One can explore the same undersea display by dropping through a "Dive Hole" elsewhere in the store, presumably while wearing dive gear purchased at the store.

Analysis and Discussion

The three levels of representation examined here—continuous/uncoded, connotative, and ekphrastic—provide a useful means of unpacking the experience that is Splash Aquatics and gaining insight into the way this visual and spatial environment may be read by visitors during a visit. At the textual level, we find a more traditional rhetorical reading possible by examining the ekphrasis attached to the store's virtual

components, and this reading yields messages that both commodify nature and, almost simultaneously, yield ecocentric meanings. As noted, Barthes sees the textual labels as anchoring the image's meaning, and the framings provided by text about cost, functionality, and technical details would seem to reinforce a technocentric and commodified reading, quite at odds with the more ecocentric aim of Splash Aquatics. It's worth noting that Barthes' explanation of the function of captions refers to explicit ones, whereas in SL some ekphrasis is 'hidden' on initial view and only visible when the user takes the additional step of hovering the mouse cursor over an object or clicking on it. This surely modifies the operation of the text, but in ways that are unclear at this level of analysis.

Two of the most prominent examples of the store's explicitly ecocentric worldview are the real-world videos in the cinema and the displays inside the deep-sea exhibit. Both anchor the virtual world to environmental concerns of the physical one. The 'habi-domes' provide a similar educational purpose by highlighting systematic interdependencies at the heart of scientific understandings of Nature, though they (and the pond 'kits') run the risk of oversimplifying the complexities and indeterminate edges of ecosystems by presenting them in neat packages with clear boundaries. From a marketing standpoint, of course, the 'habi-

domes' clearly imply that one ought to "buy the complete set!", and the embedded ekphrasis in hover-text descriptions of price, prim count, and other prosaic information reinforces the sense of nature as commodity. Clearly, a store such as this needs text captions, so the presence of these 'price tags' here is not as jarring as it would be in, say, a secluded tropical beach or a woodland riparian environment, where products from Splash Aquatics might be deployed by customers. A closer examination of such relatively ekphrasis-free islands would be a useful complement to the current study, because Barthes' theory implies that the less anchored significations of such constructions would allow more varied readings.

It is important to keep in mind that, even though this is a visual, screen-generated technology, the ability to view in all directions and the feeling of embodied presence generated by the user's avatar give what one sees ontological weight, enhancing the *punctum* of the virtual construction. "You are there" in a subjectively convincing way, looking at solid objects, not pictures. Thus it would seem that at the level of continuous and analogic representation of reality, Barthes' approach demystifies the felt realism and immersivity of this rather convincing simulation through his explanation of the continuous, uncoded nature of the press photograph. While the unreality of SL may seem obvious in the con-

text of still-evolving photorealism, further refinements in virtual worlds and parallel technologies like mixed or augmented reality will continue to challenge our ability to step outside the stream of analogic representation when presented with phenomenally convincing simulations. This is an important distinction that emerges from virtual reality as rhetorical system and is not accounted for through Barthes' method. While a press photograph is always *experienced* qua photograph, no matter its seeming analogic 'truth,' multiuser virtual environments are designed to efface the presence of mediation. The experience is thus even more reality-continuous than any photograph. I am not experiencing an image or replica of a forest, but I am – virtually, that is, in all important ways – directly experiencing a forest.

At the same time, however, Barthes' focus on the analogic and continuous nature of representation helps us see that the experience of the virtual environment is (like the photograph) fundamentally non-representational. This approach opens up a window into understanding a liminal space between the literally present and the signified as both function rhetorically. SL does indeed have a kind of life of its own, at least from the point of view of those who 'reside' there, and this is an absolutely essential component of the experience that Barthes' approach enables us to take into account.

The non-symbolic analogous

representation just described subtly blends with connotations, and here, Barthes' connection of the visual with the cultural code, which he refers to in this context as "myth," is clearly useful (Barthes 1977, 30). There is a continual repetition, through connotation, of the notion that Nature is a commodity for purchase and use by humans. While it might be argued that this is, after all, a store (and most SL builds are meant to be shared and consumed by users), one can easily imagine alternatives; perhaps a pathway down a tunnel of woods, or the entrance to a cave, that might foreground wildness without sacrificing allure. Instead, the visitor arrives at the photo wall showing customers with their purchased 'pets.' About half of the customer photos depict their purchases deployed in an artificial context, such as a koi pond or aquarium, reinforcing an anthropocentric reading. Guestbook comments (which warrant a separate analysis) suggest that visitors are as much impressed by the aesthetic and realistic feeling of the store, as by the quality of its products and services. It would be interesting to compare these to comments from a straightforward virtual pet store to see if more emotional readings occur there.

Aesthetic pleasure is also connoted by the fountain/waterfall area: historical associations of fountains with parks and palaces and the sublime grandeur of a water-fall that would be entirely in place in a landscape painting. Labels anchor and reinforce this: *Grand Spray Fountain, Triple Spray Ring, Large Natural Waterfall With Sound Effects*, etc. The fish in the ponds are koi, a highly cultivated and ornamental species. The natural waterfall is accompanied by a picnic table for human observers. While this admixture of 'natural' and 'artificial' environments might connote that humans share with the natural world a love of and need for healthy aquatic places, it also may blur the distinction between constructed and naturally-occurring aquatic environments, suggesting that the latter are equally able to be manipulated.

In several places there is a kind of mixed mediation and layering of simulacra. This can be found in the cinema (where one finds VR avatars sitting down to watch real-world video), the aquarium ornaments in the store, and the 'shark encounter' tunnels in the large tank at the end. These blur the lines between SL and real-world things that are yet not real, in the sense that they are constructed and fictional objects for human consumption. Rather than expose the virtual world as similarly artificial, they seem to constitute a kind of rhetoric of virtual realism, connoting that SL constructions are at least as valid as the simulacra that exist in physical space.

The dive shop takes this a step further by suggesting that aquatic environments in SL are real enough

that one's avatar needs this equipment to explore them safely (even though the need to breathe is not built into SL, the world contains no intrinsic 'health' component as is found in most computer games and so avatars cannot 'die'). The purchase and wearing of scuba gear further connotes a literally immersive suspension of disbelief, wherein the user accepts the reality of the simulated world. The connotation of SL as 'real-marine-environment', is reinforced by the placement of screenshots of underwater places in the virtual world - not real-world imagery as seen in the cinema display.[7]

As a side note, perhaps the most jarring element of the whole store is the fishing area, since it depicts the often problematic practice of harvesting fish for sport as just another commodified entertainment, on par with ecosystems and bodies of water. One wonders how the eco-centric shopper reads this. Does it break the illusion of realism?

Conclusion

Barthes reminds us that image connotations are often masked as literal depiction of reality, when in fact they contain the hidden rules and conventions that comprise the myths of a particular group. In the case of Splash Aquatics in *Second Life*, I argue that these myths are those of a contemporary Western society that sees Nature from an anthropocentric perspective that

valorizes visual aesthetics. That is not to say that the store's displays fail to depict nature realistically. The animals are not anthropomorphic cartoons, nor are they limited to or even chiefly charismatic macro-fauna (such as dolphins and panda bears), but have obviously been designed to reflect real-world life-forms and the habitats they live in.

Yet they are all framed within visual rhetorics of display that evoke familiar, commodified and entertainment-oriented forms (such as Sea World), and thereby inherit the corporate politics of what Susan Davis calls "spectacular nature" (Davis 1997, 15) In her critique of that theme park, Davis notes that visitors are encouraged to think that by consuming a corporate product they are discharging their responsibility to take environmental action. She argues that the scientific and educational functions of Sea World are minimal in comparison to this spectacle of commodified atonement (Davis 1997, 30). For this reason, it seems reasonable to expect that many visitors to Splash Aquatics believe their activities are more environmentally friendly than they actually are, a phenomenon similar to 'greenwashing' whereby consumption is made to appear sustainable.

As noted, it is challenging to isolate the impact of a particular text within a virtual world, or even to isolate 'the' flow of experience that constitutes the text to be analyzed.

Thus, while this walkthrough of Splash Aquatics attempts to reconstruct a typical user experience, it is only one approximation. Despite its limitations, Barthes' approach allows one to identify the ontological weight of the virtual world and the way its rhetoric operates through connotation and ekphrasis. While case studies such as this one can provide insight, future inquiry should also include the development of systematic ways to sample multiuser virtual environments. For example, geographic sampling methods might be incorporated, though given the irregular dispersal of builds in SL, more factors must be considered, such as avatar traffic, associations with real-world organizations and other linkages, proximity to popular locations, mainland versus privately owned estate, "themes" (such as the steampunk regions of Caledon), and so on. It is also clear that scholarship on constructed spaces like monuments and museums should be brought to bear on virtual worlds because senses beyond the visual are part of the experience and will doubtless play a greater role in the future because of developments in haptic technology and the blended realism of augmented reality, to name just two ways the real-virtual divide will continue to be blurred.

It is unknown how Splash Aquatics informs subsequent use. There is no guarantee that its calling-forth of the natural world will result in biologically sustainable or environmentally beneficial meanings when the store's wares are deployed on customer lands. They will likely often end up being used to create a forest idyll for avatars to gaze upon—one through which they can stroll, hand-in-hand, much like the English gardens described by Stewart and Nicholls, experiencing the Sublime at a safe and comfortable remove. In fact, 'natural' spaces in SL tend to be promoted on search engines as primarily places to relax and unwind—in other words, as places for human consumption. One area for future inquiry would be to gain a better understanding of just how users encounter "natural places" in SL. How often do users deliberately seek these out? How are the sites labeled and framed in search engines and publicity? How does this differ from more incidental exposure to virtual nature?

The anthropocentric view of Nature as tourist destination shares with conservationist and wise-use philosophies a view of Nature as in the service of humankind, rather than a more ecocentric view that might value a forest for its own sake. Anthropocentric readings can ignore underlying systems in peril. To cite but one real-life example, the Gulf of Mexico may still look beautiful at sunset a year after the BP oil disaster, but that tells us nothing about the health of the marine ecosystem below the surface, where chemical dispersants have removed the oil from view at the risk of embedding

it more deeply into the food chain. A commodified and aesthetized virtual nature in SL simply reinscribes the problematic view.

On the other hand, the economics of SL mean that users can appreciate substantial texts that have no overt commercial purpose, resisting the tendency towards universal commodification that underlies the capitalist economy. Because land in SL is costly, a large tract devoted to a realistic natural setting, filled with items purchased from Splash Aquatics, speaks to a certain valuing of the "natural" especially when there is no obvious anthropomorphic orientation to the build (such as pathways, scenic overlooks and the like) because it could have been devoted to more potentially lucrative virtual stores and rentals. In other words, nature preserves are ecocentric by their very existence— again, whether real or virtual. Furthermore, virtual "preserves" can even provide a surrogate for those unable to directly experience this kind of setting, allowing them to perhaps better understand the role the natural world plays in our existence.

Thus it seems fruitful for subsequent critical inquiry to examine some of the ways Splash Aquatics or other virtual nature products are deployed outside the frame of a store. Will commodification and anthropocentrism still prevail there? Or does the deployment suggest an ecocentric view? And how do the intentions of the authors of these vir-

tual natures interact with the readings of visitors?

Despite their unreality, virtual worlds convey a sense of ontological realism, primarily through their visual elements but also through space, sound, and movement; components that are not captured by this exploratory Barthesian reading of the store. Even though current virtual worlds like SL are heavily visual, to fully understand their rhetorical power it will be necessary to look more closely at the role of embodiment and examine how 'real' three-dimensional constructs like theme parks, museums or architecture signify their naturalness. For example, how is the rhetoric of a visual field changed when one can, in effect, walk around inside it, or even become part of it? How do size and distance, mass and texture, and varying levels of activity modify the visual experience? To what extent does an avatar cause the user to psychologically participate in a virtual forest as if he or she were really there? Future research can bring the semiotics of spatiality and kinesics to bear, among other approaches. And again it will be critical to explore the way multiple readings circulate and articulate.

Finally, Barthes' work yields incomplete analysis in this case because, unlike a photograph, SL is a social space. The presence of other avatars and their behavior in relationship to the rest of the virtual world provides an immediate social

reification of what is experienced. The virtual world is always subject to a community experience that will frame any reading. Furthermore, SL constructions are both message and public sphere, not isolated, individualistic consumer events often critiqued in the case of television or surfing the Web. The builder of Splash Aquatics seems to love and respect nature for itself, and it becomes not simply a store but a sharable space wherein a certain respect for nature can be experienced in a socially reinforcing context. That is, the experience can include interaction with other avatars, whether they might be cultural critics, travel-industry representatives, or consumerist cheerleaders. The consumption becomes a social event rather than a solitary one; Sturken and Cartwright posit SL as an example of the way "simulated spaces have become normalized in particular social contexts" in the postmodern society (Sturken and Cartwright 2009, 337). Further investigation of the interaction that goes on among users can help understand the ways people negotiate meanings in such ontologically liminal spaces.

Thus it seems probable that the engaging and convincing *punctum* of Splash Aquatics arises not simply from a visual depiction of reality, but also from things like the realistic scripted moving water and the lifelike movements of the animals, the presence of sonic features such as bird calls and splashes, the felt three-dimensionality of the space (including the role of proxemics, for example), and the social validation of its realness that emerges from the presence of other avatars. Even so, Barthes' three-level model of visual meaning may provide a root structure for analytical tools because of the continuing dominance of the visual in Western culture, even as virtual worlds are bringing something new to the media mix.

Endnotes

[1] *Second Life* is a multiuser virtual environment: a persistent three-dimensional "place" populated by objects and models that represent both fantasy and real-world phenomena, including animated "avatars" representing and controlled by users. The spaces and avatars are highly customizable through coding, modeling, graphic design -- or the purchase of virtual goods and services developed by other users, who retain intellectual property rights over the fruits of their labor (within the limits of a world whose entire existence is proprietary). Much of the virtual environment is user-created, and a great deal of activity (and real-world financial transactions) entails customization of avatars and spaces through coding, modeling, and graphic design, as well as the sale of products and services related to these activities.

[2] Barthes is certainly not the only approach possible. For example, some of the "museological rhetorics" identified by Carole Blair, Victoria Gallagher and others are worth exploring, as are rhetorics of film. Application of these and other perspectives will be explored and

critiqued in other works by this author.

[3] I use the term in its broadest sense of 'caption' or textual description of an image, which does not simply label the image but provides a framework for its interpretation.

[4] One of the most dramatic recent examples of this is the introduction of "avatar physics" (gravity-influenced breasts, bellies, and buttocks) in 2011. See Au (2011).

[5] The websites at http://primperfect-blog.wordpress.com/2008/02/23/371/ and http://secondstuff.wordpress.com/2009/03/22/ include photos and descriptions of Splash Aquatics that can help the non-SL-user visualize the store. As of this writing, the store itself may be visited in SL at http://slurl.com/secondlife/Gooruembalchi/153/202/64/.

[6] Disclaimer: The author owns several Splash Aquatics products himself.

[7] The role of scientific simulation and education in SL is beyond the scope of this analysis, but has been addressed in previous research. See, for example, Clark (2011).

Refrences

Au, Wagner. 2011. Linden Lab Adds Avatar Physics (I.E. Bouncing Breasts) to Latest *Second Life* Dev Viewer, Here's How to Get Them. New World Notes, April 4 2011. http://nwn.blogs.com/nwn/2011/04/second-life-avatar-body-physics.html (accessed September 22, 2011).

Barthes, Roland. 1977. *Image-Music-Text*. London: Fontana.

Benjamin, Walter. 1969. The Work of Art in the Mechanical Age of Reproduction. *Illuminations: Essays and Reflections*. New York: Schocken.

Book, Betsy. 2003. Traveling through cyberspace: tourism and photography in virtual worlds. Paper presented at the conference Tourism & Photography: Still Visions - Changing Lives. Sheffield, UK, July 20-23.

Clark, Joseph S. 2011. Second Chances: Depictions of the Natural World in *Second Life*. In *Creating Second Lives: Community, Identity and Spatiality as Constructions of the Virtua*l, ed. Astrid Ensslin and Eben Muse, 145-168. Oxford and New York: Routledge.

Cronon, William, ed. 1995. *Uncommon Ground: Toward Reinventing Nature*. New York: W. W. Norton & Company, Inc.

Davis, Susan G. 1997. *Spectacular Nature: Corporate Culture and the Sea World Experience*. Berkeley and Los Angeles: University of California Press.

DeLuca, Kevin M. 1999. *Image Politics: The New Rhetoric of Environmental Activism*. New York: Guilford Press.

Gramsci, Antonio. 2009. Hegemony, Intellectuals, and the State. In *Cultural Theory and Popular Culture: A Reader* 4th ed., ed. John Storey.

Harlow: Pearson Education.

Jenkins, Henry. 2004. The Cultural Logic of Media Convergence. *International Journal of Cultural Studies* 7 (1): 33 -43.

Jones, Donald E. 2006. I, avatar: Constructions of self and place in *Second Life* and the technological imagination. gnovis 6. http://gnovisjournal.org/2006/01/10/i-avatar-constructions-of-self-and-place-in-second-life/ (accessed September 22, 2011).

Latour, Bruno. 2004. *Politics of Nature: How to Bring the Sciences into Democracy*. Cambridge: Harvard University Press.

Nash, Roderick F. 2001. *Wilderness & The American Mind*, 4th ed. New Haven: Yale University Press.

Opel, Andrew, and Jason Smith. 2004. ZooTycoon: Capitalism, Nature, and the Pursuit of Happiness. *Ethics & the Environment* 9 (2): 103-120.

Patin, Thomas. 1999. Exhibitions and Empire: National Parks and the Performance of Manifest Destiny. *Journal of American Culture* 22 (1): 41-49.

Stewart, Robert Scott, and Roderick Nicholls. 2002. Virtual Worlds, Travel, and the Picturesque Garden. *Philosophy & Geography* 5 (1): 83-99.

Sturken, Marita, and Lisa Cartwright. 2009. *Practices of Looking: An Introduction to Visual Culture*. New York: Oxford University Press.

Williams, Raymond. 1974. *Technology and Cultural Form*. London: Collins.

Citizen-Driven Political Blogs as Web-based Research Samples: Opportunities and Challenges

Vincent Raynauld, Thierry Giasson, and Cyntia Darisse

The increasing adoption of blogs by Internet users during the last seven years, has contributed to the restructuration of the online political mediascape in many national contexts. Based on an analysis of the socio-political behavioural profile of French-speaking Quebec political bloggers in the spring of 2008, this article provides an assessment of the multidimensional challenges and opportunities linked to the constitution of social media research samples through non-probabilistic viral or decentralized strategies. More specifically, it argues for the development of more methodologically-rigorous quantitative and qualitative investigation approaches that can deal with the constantly-evolving structural and functional particularities of the Web 2.0 political media environment. This is especially relevant considering the rising popularity of blogs, social networking services (SNS) and other Web 2.0 tools as objects of research among the international scientific community.

This article proposes a multidimensional assessment of the methodological opportunities and pitfalls linked to the study of citizen-driven political blogs. The emergence of these media tools as an increasingly trustworthy and influential source of politically-oriented news and commentary since 2004, has been fuelled by many contextual variables.[1] For example, the public's growing levels of distrust and discontent with offline-based conventional media organizations and public institutions during the last two decades, coupled with their desire to be exposed to a diversifying range of viewpoints, frequently ignored by the mainstream press, have helped blogs gain significant traction in the political mediascape in many Western-styled national contexts (Gil de Zúñiga, et al. 2009; 2011; Johnson and Kaye 2004; 2009; Kim and Johnson in press; Ekdale, et al. 2010; Kenix 2009).

While blog usage and interest levels have sharply dropped among certain demographic groups like teens and younger adults over the

last few years with the rise and rapid popularization of social networking services (SNS) such as Facebook and microblogging sites like Twitter (Zickuhr 2010; Lenhart, et al. 2010), they remain an important component of the political communication, mobilization and persuasion landscape. For instance, they are consistently ranked as one of the most trusted online and offline sources of political information among frequent or 'experienced' blog readers and politically-savvy Internet users in the United States (Johnson and Kaye 2009: 176; Johnson, et al. 2008; Ekdale, et al. 2010; Trammell 2007; Kaye and Johnson 2011). More specifically, they are seen as equally or more credible than conventional media outlets by these segments of the online public. In comparison, members of the online population at large who are less familiar with the structural and function properties of blogs, generally have moderate to low levels of confidence in these media channels (Johnson and Kaye 2009; Johnson, et al. 2008; Kaye and Johnson 2011; Kim and Johnson in press; Banning and Sweetser 2007; Armstrong and McAdams 2011; Kaye 2010). Several studies point out that the credibility of political blogs is generally hard to evaluate, because it rests on the consideration of different multidimensional factors such as their format and visual design, the user-generated nature of their content, the depth and often informal or highly-partisan tone of their publications, the content and social interactive functionalities they offer to their readers, the socio-demographical and professional background of their authors and their visibility in the offline mass media environment (Kaye and Johnson 2011; Armstrong and McAdams 2009; 2011; Iosifidis 2011; Carlson 2007; Metzger, et al. 2010).

The relatively high profile of blogs in recent years has led to the production of a growing body of scientific literature, tackling a wide range of politically-oriented blog-related themes such as content production, coproduction and dispersion, community building, identity management and civic engagement (eg.: Schmidt 2007; Kim and Johnson in press; Larsson and Hrastinski 2011; Jankowski and Van Selm 2008; Skoric, et al. 2009).[2] More specifically, it is possible to argue, based on Siapera's work (2008), that the bulk of the research on citizen-driven political blogs has centered on four of their primary roles which can affect in varying ways formal and informal political processes. First, the previously-mentioned increasing loss credibility of traditional formal political players has heightened their capacity to influence in a bottom-up fashion the structure of online as well as real-world public deliberation, more broadly known as grassroots-driven agenda-setting (Siapera 2008; Park 2009; Payne 2010; Blumler and Coleman 2010).

Indeed, their publications often comprise facts, arguments, opinions and analyses that have little to no resonance in the offline mediascape, but that can complement, challenge and, in some cases, shape offline-based journalistic organizations' news coverage and politicians' discourse (Johnson and Kaye 2004; 2009; Sweetser and Kaid 2008; Gil de Zúñiga, et al. 2011; Meraz 2009). In the words of Wei (2009: 548), they play the role of 'mainstream media fact-checkers and ideological watchdogs' (Glaser 2009).

Secondly, the relative independence of their authors from commercial, political and corporate interests gives them more latitude to conduct in-depth investigations and publicly expose political scandals or controversies. Moreover, it allows them to discuss more extensively issues or events that receive limited coverage in conventional media outlets because they generate little interest among the public (Siapera 2008; Kenix 2009; Woodly 2008; Johnson and Kaye 2009). Thirdly, citizen-driven political blogs constitute an aphysical conversational and deliberational arena where Web users can independently engage in multidirectional discussions, share information and build issue-oriented transient social networks. In some cases, they can have politically-oriented educational and mobilizatory effects on the public and ultimately lead to increased levels of formal and informal political engagement (Siapera 2008; Gil de Zúñiga 2009; Lev-On and Hardin 2008; Skoric, et al. 2009; Farrell, et al. 2008). Finally, citizen-driven political blogs constitute a flexible media channel that can potentially foster the development and the strengthening of two-way communication bridges between members of the citizenry and the formal political sphere (Siapera 2008; Woodly 2008; Coleman and Wright 2008).

However, little scholarly work has been done in recent years on the methodological implications of investigating Web 2.0 media technologies or, in the specific case of this article, citizen-driven political blogs (e.g. Boyd and Ellison 2007; Ahn, et al. 2007; Li and Walejko 2008). Several variables are responsible for this situation, such as the complexity and resource-heavy nature of academic research, as well as the slow pace of the scientific publication process, which prevents scholars from keeping up with their constantly-evolving structural and functional properties (Karpf 2008). As noted by Karpf (2008), blogging research conducted in 2004 and 2005 was generally available in scientific books and journals in 2008. Several authors point out that this constitutes a challenge for the contemporary scientific community (Karpf 2008; Roman 2011).

Building from a previous project on the online and offline socio-political behavioural profile of Quebec-based French-speaking political

bloggers which was conducted in the spring of 2008 (Giasson, et al. 2008; 2009), this article provides a broad characterization of the methodological constraints and opportunities linked to the study of political blogs and, by extension, other Web 2.0 media channels. The first section will provide a brief overview of the implications of broader Internet research for political communication scholars. This article will then feature an in-depth look at the various sampling issues facing social scientists studying Web-based decentralized content dispersion and social networking political networks. More specifically, an examination of structural and functional particularities of political blogs and their impact on sampling and research designs will be conducted. This will help to identify the major concerns that need to be considered for the constitution of viable research samples through conventional and non-conventional modes of sampling. The sampling strategy used for the Quebec blogging project was particularly important due to the need to select a group of bloggers that would adequately reflect the membership of the political blogosphere of Quebec, a Canadian province characterized by its linguistic, geographical, cultural, economic, religious and political specificities (Fournier 2001; 2002). Due to the availability of a wealth of scientific and professional political blogging-related studies conducted recently in United States

and many European countries, this section of the article will offer an extensive assessment of the methodological strengths and flaws of the sampling tactics used by social media researchers since 2004. Finally, the last section of this article will feature a brief discussion of the growing relevance of decentralized or viral-oriented sampling techniques which were used in the study of Quebec-based French-speaking political bloggers, and the role they are expected to play in future social media-related scientific work.

The opportunities and pitfalls of conducting online political communication research

Web-based media platforms have been rapidly adopted by formal political actors for content dissemination, mobilization and persuasion purposes in many Western-styled national contexts since 1996 (Davis, et al. 2009; Blumler and Kavanaugh, 1999). More specifically, they frequently used them in ways replicating the conventional media dynamic, thus rendering real-world investigation methods partly applicable. For example, the campaign website of an overwhelming majority of institutionalized political players before the 2000 Presidential campaign in the United States strictly adhered to the 'broadcast politics' paradigm which governed real-world mass-mediated political communication (Benoit and Benoit 2005; Kreiss and Howard 2010). The re-

cent rise of social media channels, which vastly differ from Web 1.0 technologies due to their distinct structural and functional specificities, as important players in the political communication, mobilization and persuasion landscape has yet again challenged social scientists' conception of the media world (Li and Walejko 2008; Verdegem 2011; Hanson, et al. 2010). More broadly, Morris and Ogan (1996) believe that the Internet represents an aphysical media space, forcing 'scholars [from all fields] to rethink assumptions and categories, and perhaps even to find new insights into traditional communication technologies'.

Computer-mediated communication (CMC) technologies have rapidly become widespread and 'fashionable' multidisciplinary research objects during the last two decades (Kim and Weaver 2002; Wright 2005; Schneider and Foot 2004; Dahlberg 2004). Many factors have been inciting and, inversely, deterring academics from conducting Web-related research projects over the last two decades. The newness, the speed, the flexibility and the relative ease and low cost in terms of time and resources of this type of research work, constitute the primary incentives of online research. Conversely, the nascent nature and the on-going development of this media environment, which forces scholars to constantly rethink and redefine their theoretical and methodological assumptions and adopt

new ones, coupled with the general lack of understanding of online research objects by the scientific community, constitute the main drawbacks of this type of scientific work (Nancarrow, et al. 2001; Bennett and Iyengar 2008; Hine 2005; Hopkins and King 2010). There are several other challenges posed by Web-only research, such as the need for the development quantitative and qualitative content analysis techniques tailored for the study of multidimensional digital material, flexible sampling processes as well as new result presentation and description designs (Jankowski and Van Selm 2008; Hopkins and King 2010).

More specifically, many mass media scholars overlooked the World Wide Web in its early years for several reasons. For example, it was incompatible for a long period of time with their widely-recognized theoretical and conceptual vision of the conventional media environment. Indeed, it was 'locked [...] into models' of unidirectional content dispersion and social relations which were privileged by dominant offline-based broadcast media outlets (Morris and Ogan 1996). Several facets of conventional media-inspired investigation techniques, which were designed for the analysis of one-to-one, one-to-few or one-to-many highly-hierarchical information transfers and socio-interactional processes, were progressively altered for the study of online communication technologies

(Livingstone 2004; Jankowski and Van Selm 2008).

According to Wellman (2004: 123), Web research from a social science perspective has undergone three (3) distinct developmental stages throughout the last three decades. First, the Internet was treated as a 'bright light, shining above everyday concerns' and its impact were studied through the consideration of the 'conjecture and anecdotal evidence', consequently rendering the results of analyses mostly utopian and potentially unrepresentative, thus mostly unreliable. The second phase, which started in 1999, focused on the documentation of 'Internet uses and users' through different socio-demographical data-gathering tools such as large-scale online surveys and interviews (Wellman 2004). According to several authors (e.g. Dahlberg 2004; Kim and Weaver 2002), this type of research still constituted the bulk of published Internet-related scientific work as of 2004. The last online research stage is characterized by the emergence and development of highly-specific and multidisciplinary projects relying on a strong theoretical and conceptual framework (Wellman 2004). Social media research, which gained significant traction in recent years, should fall in this category. However, it is possible to argue that the majority of scholars currently studying the social media phenomenon have adopted mostly-descriptive approaches which are more in line with the first and second stages of Internet research (e.g. Larsson and Hrastinski 2011).

While online political research can be characterized as still being in its relative infancy compared to most other fields of scientific work, sharp divisions have already emerged between two groups of scholars who represent the 'philosophical forces of stability versus change' (Dutta-Bergman 2004: 42; Anstead 2008). On one hand, social scientists adhering to the normalization theory[3] argue that online media tools are replicating and, in some cases, strengthening according to reinforcement theorists real-world political communication, persuasion and mobilization patterns that are prevalent in mature Western-styled democratic contexts (Park and Perry 2008; Foot, et al., 2009; Lee and Park 2010). They are characterized by the unidirectional top-down transfer of highly-controlled multidimentional digital content and mobilization initiatives from a limited number of politically-dominant elites, also known as 'established power structures' (Strandberg 2008: 224; Latimer 2009; Margolis and Resnick 2000). On the other hand, equalization or cyber-optimistic theorists[4] believe that they are contributing to the progressive emergence and development of transformative political communication, persuasion and mobilization ways (Park and Perry 2008; Foot, et al. 2009). More

broadly, they have adopted a technological deterministic vision of the evolution of socio-political processes (Smith and Chen 2009).

Some scholars have adopted a middle-of-the-road vision of the effects of the Internet on politics, which can be arguably seen as essential to consider, in order to fully understand the contemporary digital campaigning dynamic. In fact, they argue that the consideration of both analytical approaches is essential to fully understand the Internet-based political dynamic. While they agree that the content circulated online by formal and informal political actors constitutes one of the primary drivers of the transformation of socio-political processes, they also acknowledge that the distinct capabilities of Web-based communication tools can have important structuring effects on information flows and social contacts (e.g. Lee and Park 2010; Bimber 2000). They believe that the complex relationship between the Internet and politics is influenced in varying ways by several contextual factors 'such as the achieved level of democratic and economic development, [the level of development of digital communication technologies with different publication capabilities,] institutional dynamics and offline political culture' (Lee and Park 2010: 33; Foot, et al. 2009).

This paper will take a pragmatic look at the methodological challenges and opportunities of studying citizen-driven political blogs. A large number of researchers have exclusively relied on traditional methodologies that are still widely used for the study of offline-based political communication phenomena when examining different facets of the blogosphere (Li and Walejko 2008). This paper will argue for the development of robust methodological approaches inspired from offline-inspired techniques, but adequately suited to deal with the structural and functional specificities of the social media environment (middle-of-the-road methodological solutions). More specifically, it will take a look at specific methodological issues that were encountered in the study of the Quebec-based political blogging community such as the identification of politically-oriented blogging populations and the selection of appropriate sampling strategies.

Identifying political blogging populations

The identification of the population studied, in this case the politically-oriented Quebec-based blogging community, was complicated by several structural characteristics of the political blogspace which can affect any political blogging studies. First, a detailed portrayal of political blogs is required to clearly differentiate them from other blogging subcategories (Farrell, et al. 2008). While the term 'blog' previously referred to a well-defined group of activities, it can now be associated to highly-heterogeneous practic-

es (Karpf 2008). For example, the search engine *Yahoo!* listed eighteen different blog genres in 2006 (Efron 2006). Political blogs, which are often categorized as 'news blogs' due to their heavy focus on current events with politically-oriented ramifications, can take different formats, feature a diverse range of multidimensional content genres and serve various information dissemination, mobilization and persuasion purposes (Trammell and Keshelashvili 2005; Jones and Himelboim 2010; MacDougall 2005; Serfaty 2011). For example, the majority of influential political blogs in the United States can be defined as 'filter blogs' due to the omnipresence of hyperlinks in their publications. Web links can have channelling effects on audience members' content selection and consumption behaviour by redirecting them to publicly-available online resources comprising information directly or indirectly linked to the argumentation made in the original blogpost (Hookway 2008; Herring, et al. 2005; Wei 2009). Interestingly, filter blogs have been garnering the bulk of the conventional media coverage in recent years in the United States, thus partly explaining their popularity among the public (Jones and Himelboim 2010; Schmidt 2007).

Several studies have also shown that politically-oriented digital material is present on all types of blogs, thus significantly complicating the identification of those that can be categorized as truly political. As noted by Sweetser and Kaid (2008: 73), not all blogs are in-your-face political. For example, Trammell (2005) studied the posts of 47 celebrity blogs in 2004 and found that 18 per cent of them featured overt politically-oriented digital material such as 'blatant political statements' (Sweeser and Kaid 2008). Moreover, many of their posts also comprised 'parapolitical' (Dahlgren 2005) or entertainment-oriented content that could have direct or indirect shaping effects on readers' perceptions of politics and potentially modify their levels of political interests and engagement. Interestingly, celebrity bloggers, which 'make political statements at a much higher rate than' other members of the blogging community, are considered by younger Web users as equally credible to politicians or other independent political groups (Sweetser and Kaid 2008: 73; Kaid and Postelnicu 2006; Trammell 2005; Sweeser and Kaid 2008). More recently, a content analysis of 23,904 blogs focusing on a wide range of topics not necessarily linked to politics, which were selected through the online portal *Bloggers.com* from January 6th to January 20th 2008, showed that their posts and comments left by readers (when a comment tool was available) featured a sizable 'volume of political discussion' (Munson and Resnick 2011).

According to Wallsten (2005), there are two main techniques to

determine if blogs can be catego-rized as political. First, a quantitative keyword analysis of their content can be conducted to evaluate the publication periodicity of politically-charged material, but few authors have provided precise benchmarks for the determination of the political nature of blogs. Secondly, research-ers can rely on bloggers' own as-sessment of their blog through, for instance, the consultation of bio-graphical sections when available, or by conducting structured or semi-structured interviews with them through email messages or secure online surveys. However, this ap-proach can be seen as potentially biased since some of them might characterize their publications as political when, in fact, they contain little to no politically-oriented digital material (Wallsten 2007). According to Wallsten (2005), these methods generally require 'a large sample of bloggers just to find the small num-ber of blogs that are political'.

Other approaches to identify po-litical blogs have been developed in recent years such as consider-ing public directories or political blogrolls, analyzing conventional media's reporting, which frequently mentions political bloggers consid-ered as highly-influential, or con-ducting large-scale surveys or in-terviews with blog readers (Park 2009; Wallsten 2005; 2007; Park and Thelwall 2008; Karpf 2008). More recently, Munson and Resnick (2011) used *Amazon*'s Mechanical Turk, a Web-based micro-tasking labor market, to assemble a panel of five Web users who were shown blogs and were then asked to classi-fy them based on a list of pre-deter-mined eight categories in exchange for small payments.[5]

However, these methods have multiple drawbacks. For example, public directories and news media reports generally feature a small number of A-list blogs, and ignore the thousands of B-list and C-list blogs which can be defined as 'less read political blogs that are writ-ten by average citizens every day' (Wallsten 2005). In fact, the conclu-sions of previous studies of the U.S. political blogosphere that relied on these techniques are potentially un-reliable due to their consideration of only a small and potentially unrepre-sentative fraction of the blogspace that does not provide an adequate depiction of overall politically-ori-ented blogging activities (Wallsten 2005). As for Munson and Resnick's use of *Amazon*'s Mechanical Turk to assemble a panel of Web users to evaluate the political nature of blogs, the validity of this approach can be questioned. While they were able to rapidly identify 'bad workers' and replace them on the panel, it was still impossible for them to inde-pendently evaluate the competence (eg.: level of familiarity with blogging practices, level of political sophisti-cation, etc.) of all the panel mem-bers, thus their ability to positively contribute to their research project

(Munson and Resnick 2011). More broadly, it is possible to argue that the categorization of blogs heavily relies on informal and potentially biased evaluation processes (Farrell, et al. 2008).

Secondly, the constant launch of new blogs has on-going restructuring effects on the blogspace, thus preventing the constitution of comprehensive and up-to-date repertoires of all its members and the mapping of its architecture (Hargittai, et al. 2008; Trammell and Keshelashvili 2005). For example, David Sifry (2007) has demonstrated through a series of periodical surveys that the U.S. blogosphere has rapidly expanded since 2004. Also, the specialized search engine *Technorati* tracked nearly 70 million blogs in March 2007 with more than 120.000 new ones being launched every day. However, the rapid expansion of the blogspace that was observed between 2004 and 2007 has considerably slowed throughout the last three years, especially with the popularization of new social media platforms such as social networking sites and status-updating tools (Zickuhr 2010; Lenhart, et al. 2010).

Thirdly, many weblogs can remain inactive for periods of time of varying length or even be temporarily or definitively abandoned by their authors, thus further complicating the process to identify which blogs are active members. A study conducted in 2004 showed that 66 per cent of blogs were not updated after two consecutive months (Perseus 2004). Some researchers have established clear benchmarks to determine whether blogs are dead, or no longer active in the blogosphere, or they can be considered as alive. However, it is important to point out that the research objectives of scholars will dictate if they can consider these blogs in their study or not (Li and Walejko 2008).

Fourthly, the heavy presence of fake or spam blogs which are often launched by commercial, corporate or political actors to promote specific issues, ideas or events, can further complicate the process. Just like the identification of political blogs previously discussed in this article, it can force researchers to develop a similar approach to determine whether blogs serve genuine political purposes (Li and Walejko 2008; de Zúñiga, et al. 2010). According to some estimates, fake or spam blogs represented between two per cent and eight per cent of the U.S. blogosphere in 2010 (de Zúñiga, et al. 2010).

Finally, the geographically-specialized nature of the study of the members of the Quebec political blogosphere required the determination of bloggers' physical location. Blog authors generally have a tight control on the personal information they disclose on their blogs (Su, et al. 2005). However, political bloggers tend to disclose 'slightly' more identity markers than personal

bloggers (Su, et al. 2005). Several reasons can incite bloggers to volunteer identity markers on their blogs, such as their desire to build and maintain a network of social contacts, to play an active role in their immediate geo-political context or to bolster their credibility by enabling their readers to evaluate their personal background or expertise (Flanagin and Metzger 2008).

The geographical location of bloggers can be determined with the help of different techniques. First, personal and geographical information can be found in the biographical section of blogs. Secondly, informal interviews can also be conducted with bloggers or weblinks to online surveys can be sent to them in order to gain personal information about them and ultimately pinpoint their geographical location (Wallsten 2005). However, it is often impossible for researchers to independently verify the information disclosed by bloggers. Thirdly, a content analysis of their publications can provide insights of varying level of precision on their physical location. For example, geographical references or recurrent publications on political issues or broader themes associated to specific geo-political contexts can provide details on their physical location. Fourthly, many bloggers are affiliated with one or more groups and organizations based in specific geographical locations, thus helping to determine where they are located. Finally, scholars can turn to in-

formal public directories listing weblogs by the geographical location of their authors. However, there are few mechanisms enabling the verification of the validity and accuracy of these directories and the credentials of their creator(s).

While the total size of the Quebec French-speaking political blogging community was unknown at the time of the analysis due to a lack of comprehensive quantitative surveys, it was possible to argue that it counted no more than 125 active members in April 2008. This approximation was based on the consideration of two informal repertories of political blogs publicly-available at http://www.tlmeb.com and http://www.top-blogues.com, which provided rough estimates of the weekly traffic in the Quebec blogosphere. The first site identified 65 active political bloggers, while the second listed 121 individuals. The thirty most-trafficked political blogs from both indexes were relatively similar, thus indicating their relative compatibility. While the methodology used for the classification of blogs by the creators of these repertoires was not readily available, the political nature of the selected bloggers was later confirmed through their answers in the online survey as well as an informal analysis of the content of their posts (Giasson, et al. 2008; 2009).

Engineering a flexible sampling strategy

Another methodological hurdle

encountered when conducting the study of the Quebec-based political blogging population was the selection of a sampling strategy that would lead to the constitution of a reliable research sample. Several sampling approaches, specifically addressing the structural particularities of the U.S. political blogosphere, have been developed in recent years by the international scientific community. The selection of the sampling tactic is frequently guided by different elements, such as the broad objectives of the research project, the method of analysis privileged (eg.: quantitative, qualitative, etc.) and the unit of analysis selected. While the individual blog was the primary unit of analysis in the majority of blog-related articles in major scientific journals back in 2004 (83,3 per cent), researchers have progressively shifted their attention to a rapidly-diversifying range of micro-content such as blogposts, blogrolls, 'blogs in combination with similar Internet phenomena' as well as images, videos and hyperlinks imbedded in blogposts. More broadly, the 'blog as a whole' was the primary unit of analysis in 57,7 per cent of the blogging studies available in major scientific journals between 2002 and 2008 (Larsson and Hrastinski 2011).

From a broad perspective, there are two categories of sampling approaches: probabilistic and non-probabilistic. First, probabilistic sampling is characterized by the fact that 'each unit in the population [studied] has a known, non-zero chance of being sampled' (Li and Walejko 2008). While many conventional offline-inspired probabilistic sampling practices such as simple random sampling, stratified random sampling and cluster sampling have been utilized by researchers interested by the blogging phenomenon during the last seven years, they have so far failed to generate adequate samples and therefore need to be redefined (Nardi 2006; Ahn, et al. 2007). As argued in this article, the constant-evolving nature of the political blogosphere renders the establishment of a probabilistic and representative sample highly difficult and, in some cases, unlikely (Li and Walejko 2008). At the same time, many methodologically-questionable sampling tactics have been exploited to study the blogosphere. In fact, many of the approaches used by researchers can be defined as experimental, 'though not lacking in creativity' (Gruszczynski 2009: 7). This situation reaffirms the need for the development of comprehensive and conceptually-robust methodological strategies. The highly-fashionable status of social media-related research projects must not deter academics from conducting methodologically-sound descriptive and, more importantly, analytical work which has been lacking in recent years in order to better understand this growingly-important media phenomenon (Gruszczynski 2009;

Dahlberg 2004).

A clear identification of the corpus is necessary, so the ensuing analysis can generate precise and meaningful data. Several scholars have opted for mostly random identification and selection processes since the rise of social media research in 2004. On one hand, some of them preferred totally random sampling techniques that could have negative effects on their research results. For example, Bar-Ilan (2005), who conducted a study of topic-oriented blogs in 2005, based her blog selection on her informal browsing of the blogspace, as well as her personal and professional interests. On the other hand, others have opted for stratified random sampling tactics, which are characterized by their ability to ensure that all the different segments of the population are adequately represented (eg.: McKenna and Pole 2008; Li and Walejko 2008). According to Wallsten (2005), probabilistic random sampling techniques can be used effectively if there is an exhaustive and accurate blogging population directory. For example, the political nature of every blog's content could be checked in order to determine whether it meets a specific, and often arbitrary, threshold to be included in the research sample (Wallsten 2005). This procedure could be repeated until the desired sample size is reached. However, the changing nature of the blogosphere, which prevents the constitution of a comprehensive and up-to-date list of its members and a portrait of its internal structure, renders this approach difficult to implement (Jankowski and Van Selm 2008).

A non-probabilistic sampling method was chosen for the study which constituted the basis of this article. Non-probabilistic sampling can be defined by the fact that 'the probability of sampling all elements in this target population is unknown' (Li and Walejko 2008). In other words, the size and composition of the population studied is unknown. Non-probabilistic snowball techniques have been extensively used to study the blogosphere and other online social networks in recent years (Herring, et al. 2005; Johnson, et al. 2008; Ahn, et al. 2007). They arguably represent one of the few sampling strategies currently suitable for blog-related research, for different methodological reasons. Other Web-only sampling strategies that have been developed over the last few decades, such as node and link sampling, which favour the creation of samples through the consideration of the hyperlinked structure of the Web, do not adequately represent the decentralized and unpredictable nature of social relations and information flows characterizing Internet-based communities. They could potentially have detrimental effects on the validity of research samples (Ahn, et al. 2007).

It is possible to argue, based on Vergeer and Hermans (2008) and

Li and Walejko's work (2008), that strict snowball sampling procedures can lead to the constitution of biased samples, not adequately portraying the structure of Web-based content dissemination and social relations. However, the absence of precise and exhaustive sampling bases of political blogs has made non probabilistic sampling strategies the default choice for many social media researchers in recent years. In fact, these methods, which are primarily used in qualitative investigations similar to the one carried out in the Quebec study, represent one of the few viable alternatives to identify these types of population. They are likely to gain significant traction among the international academic community over the upcoming decade, especially with the growing role of social media platforms in the public mediascape of several national contexts.

The selection of sampling strategies was also guided by the data-gathering techniques used by researchers. In the case of the investigation of Quebec-based political bloggers, the data was collected through a publicly-available secure online questionnaire, available on the *Groupe de recherche en communication politique*'s (GRCP) website, hosted by Laval University's Web servers for two weeks (April 15th 2008 to May 1st 2008 inclusively). Many studies focusing on bloggers have opted for this approach to collect data (eg.: Johnson, et al.

2008). Other methods could have been used, such as email interviews or more conventional methods such as mailed questionnaires. The survey comprised 58 structured and semi-structured questions unevenly distributed in seven thematic sections, focusing on bloggers' socio-demographics, their political profile and preferences, their blogs' content and structure, their blogging practices, their communication objectives and intentions, as well as their broader use of social media tools.

According to Wright (2005), online survey technologies have several internal characteristics that can, directly or indirectly, affect the constitution of research samples. First, their electronic format favours their fast circulation to a large pool of respondents, independently of several considerations such as their geographical location. Their answers can be subsequently sent back electronically, and automatically entered into databases and processes with the help of different software. Secondly, unlike paper-based surveys, their format is cheaper because it does not require the questionnaires to be printed, thus eliminating 'postage, printing, and data entry' costs (Wright 2005). Moreover, it does not require respondents to provide important personal information, such as their mailing address. In the case of the survey of Quebec-based political bloggers, the Web-based data col-

lection mechanism selected enabled the questionnaire to reach an important number of recipients who would have not normally participated in the study, because several limitations, such as geographical distance and time constraints were evacuated. Moreover, it was better suited to the profile of the respondents who were more likely to be technologically-savvy.

The research sample for the study on the Quebec blogosphere was constituted through the use of a two-step sampling procedure. First, a conventional reasoned choice approach was employed to select twenty-two A-list political bloggers who were not formally affiliated to political, commercial or conventional media organizations. They were identified through the consideration of the two blog listings, as well as following an informal content analysis on the coverage of the 2007 Quebec Provincial elections by the mainstream press, which often referred to members of the Quebec-based blogging population. An email invitation to fill out the survey with a hyperlink to the online questionnaire was subsequently sent to them. Secondly, a snowball technique with a viral dissemination component enabled the multidirectional and, to a certain extent, uncontrolled circulation of the survey within the Quebec blogosphere. This viral diffusion was accomplished through two distinct communication channels, an approach used by other researchers

in recent years (e.g. Wallsten 2008; Jankowski and Van Selm 2008). First, the selected A-list bloggers who positively responded to the initial request in the reasoned choice sampling phase were asked in a second email to forward the survey's Web link to three other Quebec-based political bloggers they knew through their personal online or offline social network. They were also asked to publicize the study on their blog by embedding at least once a hyperlink pointing to the questionnaire on their blog. It should be noted that this strategy for advertising a scientific investigation has been used previously by other scholars (e.g. Johnson, et al. 2008). Finally, an email was sent to four Quebec-based French-speaking journalists maintaining widely-read blogs, often focusing on specific topics (e.g. technology, politics, etc.), to ask them to publicize the study. Two of them responded positively to the request and mentioned the study in their reporting.

Fifty-six bloggers ultimately completed the online secure questionnaire during the two weeks recruitment period. More specifically, sixteen out of the twenty-two highly-influential political bloggers contacted in the first sampling round answered the secure online survey. Additionally, forty bloggers contacted during the viral dissemination phase participated in the project.

While the total number of respondents is relatively smaller than

comparable studies (e.g. Braaten 2005), the high level of geo-political specialization of this project and the relative small size of the Quebec political blogosphere explain and, to a certain extent, warrant, the size of the research sample. Moreover, the underdeveloped nature of the digital media infrastructure of the rural regions of the province of Quebec, where a sizable portion of the population resides, can be seen as another factor explaining the small size of the Quebec blogging population (Zamaria and Fletcher 2007; Institut de la Statistique du Québec 2009). Still, the Quebec political blogosphere study can be advantageously compared to investigations of political bloggers conducted in other national contexts, such as the United States, which featured generalizations based on relatively small samples in comparison to the potential size of the population (e.g. McKenna and Pole 2008).

It should be noted that the ideological portrait of the Quebec political blogosphere generated through the survey was influenced by several unavoidable selection effects linked to the nature of viral sampling strategy as well as the data-gathering technique selected. For example, the results of the Quebec blogging study showed that while the Liberal Party of Quebec won the 2007 Provincial elections with 33.08 per cent of the vote, the vast majority of the political bloggers surveyed revealed that they supported other political parties. For example, 35.7 per cent of the respondents reported voting for the Parti Québécois (PQ), 5,4 per cent for the Green Party of Quebec (GPQ) and 16.1 per cent for Québec Solidaire (QS), a left-leaning political formation. Only 5.4 per cent of the respondents voted for the Quebec Liberal Party (PLQ) on Election Day. These results clearly indicate that the Quebec-based French-speaking blogging population was not representative of the overall public.

While invitations to fill out the survey were sent personally or virally disseminated to Quebec-based bloggers of all political allegiances, the very nature of the sampling method used in this project might have contributed to the larger circulation of the survey within ideologically-specific blogging networks. For example, some bloggers might have deployed greater efforts to transmit invitations to participate in the study within their personal social networks, comprised of bloggers with relatively similar political preferences, for different reasons such as their desire to influence the study's conclusions in politically-specific ways or to gain credibility among their peers.

The heavier participation of certain segments of the Quebec political blogosphere could indicate higher level of mobilization as well as the presence of a potentially tighter social network in certain online political communities. More specifi-

cally, the viral sampling technique could be in itself an indicator of the socio-political behavioural profile of Quebec-based bloggers. The data showed that left-leaning political bloggers answered the online questionnaire at a higher rate than their right-leaning counterparts. This deeply influenced the study's evaluation of the ideological structure and composition of the Quebec political blogging community. More broadly, it demonstrated that bloggers supporting left-leaning political parties were more politically-energized than members of other political groups in the spring of 2008.

While the viral sampling dimension of the study prevents future research from fully replicating its approach, the very nature of the Web environment renders the exact reprisal of research projects extremely difficult and, in some cases, highly improbable. Indeed, the continuous evolution of online information dissemination architectures and social networks, in this case the Quebec political blogosphere, only allow social scientists to produce a detailed portrayal that is representative and valid for a short time period (Kautsky and Widholm 2008). Therefore, the timing of the Quebec blogging study (time the surveys were sent to A-list political bloggers, time the study was forwarded to other participants, time it was mentioned by the two journalists) might have influenced the results of the viral sampling process due, for example, to the levels of mobilization in specific political segments of the Quebec blogging population. Still, the sampling strategy that was selected for this study was the source of meaningful findings. Indeed, it accurately depicts the political reality within Quebec's political blogspace at a specific moment in time.

Conclusion

This article presents a broad characterization of the methodological opportunities and challenges linked to the study political bloggers, based on a study of the membership of the Quebec political blogosphere conducted in the spring of 2008. It shows that while an important number of multidisciplinary investigations focusing on blogs in different national contexts have been conducted throughout the last seven years, there are still significant conceptual and methodological gaps that need to be filled. This paper aims to address some of the methodological hurdles facing social scientists interested by the blogosphere and, to a certain extent, other Web 2.0 outlets. First, it discussed the main challenges linked to the clear identification of political blogging populations such as the portrayal of political blogs which can have different formats and feature a wide range of politically-oriented material as well as the constantly-evolving nature of the political blogosphere. Secondly, it demonstrated that sampling techniques

used for the study of real-world political communication phenomena could not be used to assemble a representative research sample of political bloggers. Indeed, researchers must develop flexible sampling techniques that are tailored to the structural specificities of the political blogspace when they are conducting their investigation. More broadly, the main argument of this paper that the constantly-evolving nature of the political blogosphere requires researchers to be constantly questioning their methodological approach and, more importantly, quickly modify it when required.

Most blog-related studies have predominantly focused on A-list or highly-influential bloggers which only represent a small proportion of the blogging population in many Western-styled national contexts. However, the popularization of these media channels among the mainstream public coupled with the growing fragmentation and decentralization of formal and informal political communication, persuasion and mobilization practices in several national contexts are likely to force researchers to redefine their analytical scope. Indeed, several factors have contributed in recent years to the progressive hyper-compartmentalization of the public political discursive arena, such as partisan or ideological preferences, issue specialization, geographical context as well as individuals' socio-demographic profile. This situa-

tion has arguably mobilized some members of the electorate who are more likely to use a wide range of Web 2.0 technologies to directly or indirectly participate in the public deliberational and conversational arena. This complexification of the Web-based politically-oriented informational and socio-interactional environment will require the redefinition of sampling and investigation techniques to render the study of specific aspects of the formal and informal online politicking dynamic possible.

It is important to point out that the emergence and popularization of different social media platforms during the upcoming decade will force social scientists to further adapt their sampling and analytical techniques. Beyond blogs which have been extensively studied in recent years, other Web 2.0 media technologies such as social networking sites, micro-blogging or status-updating technologies such as *Twitter* as well as synchronous or asynchronous video and audio-sharing platforms like *Ustream* or *Flickr* have become growingly-popular multidisciplinary research objects. Indeed, they foster diverse forms of information dispersion and socio-interactional patterns that will require tailored and often highly-flexible methodological approaches. Moreover, they will provide researchers with a new set of methodological challenges and, conversely, opportunities that will need to be clearly defined and sub-

sequently addressed. For example, the increasing ability of SNS users to protect their personal informal with different privacy tools, thus making it unavailable for researchers, and the growingly-central role of the structure of social networks, especially in the case of social networking services such as *Facebook* and *Google+*, will force social scientists to develop new investigation parameters. In other words, the 'perpetual beta' nature of the social Web will require them to be far more methodologically-flexible (Carpenter 2009). Also, many companies who own social networking services and status updating tools, such as Twitter, have started to prevent individuals and organizations from having access to the content produced by their users.

While this article has primarily looked at sampling issues associated to blog-related research, more scientific work is urgently required to better understand the strengths and weaknesses of quantitative and qualitative research techniques for the study of social media content. Indeed, the growing importance of hyperlinked content as well as other multidimensional digital material that can have direct or indirect quantitative and qualitative implications, such as Twitter hashtags and Facebook photo tags, will require researchers to significantly modify their analytical approaches. In other words, methodological flexibility and creativity is likely to become very important for members of the scientific community who are interested by the social mediascape.

Endnotes

[1] For example, they played a central role (eg.: information dissemination, fundraising, mobilization, etc.) in Howard Dean's campaign for the U.S. Democratic Presidential nomination in 2004 (Kim and Johnson in press; Gil de Zúñiga 2009; Davis, et al. 2009). However, they had some influence in the U.S. mediascape prior to the 2004 Presidential elections, especially after the 9/11 terrorist attacks. For instance, they are credited for forcing Trent Lott to leave his post as Senate majority leader in 2002 by publicizing his racially-insensitive comments on Strom Thurman's segregationist Presidential campaign in 1948 (Ekdale, et al. 2010; Jones and Himelboim 2010; Serfaty 2011; Kim and Johnson in press). They also scrutinized the work of several conventional media organizations which led to the resignation of New York Times executive editor Howell Raines in the wake of the Jayson Blair plagiarism affair in 2003 (Gil de Zúñiga, et al. 2011).

[2] For example, Larsson and Hrastinski (2011) determined that 34 blogging studies focusing on politics were published between 2002 and 2008 based on the consideration of two databases that index the content of '3,300 journals of high quality'.

[3] The normalization theory states that the political communication, mobilization and persuasion dynamic that is dominant in the offline political mediascape is more to likely to be replicated online with the rise and growing popularity of Web-based media channels. For instance, political actors that are dominant in the real-world media environment usually have a strong Web presence while peripheral ones are more likely to have a minor presence (Margolis, et al. 1999; Margolis and Resnick 2000; Foot and Schneider 2002).

[4] According to the equalization theory, the emergence of Internet-based communication technologies is expected to contribute to the progressive transformation of political communication, mobilization and persuasion patterns which were dominant in the offline media world. For example, the World Wide Web is likely to reduce the media gap online and, to a certain extent, offline between dominant and peripheral political players (Margolis, et al. 2009; Tyler 2002; Lee and Park 2010).

[5] https://www.mturk.com/mturk/welcome (accessed May 22nd, 2011).

References

Ahn, Y.-Y., S. Han, H. Kwak, Y.-H. Eom, S. Moon and H. Jeong. 2007. Analysis of topological characteristics of huge online social networking services. Proceedings of the 16th international conference on World Wide Web.

Anstead, N. 2008. The Internet and campaign finance in the US and the UK: An institutional comparison. *Journal of Information Technology & Politics* 5(3): 285-302.

Armstrong, C. L. and M. J. McAdams. 2009. Blogs of information: How gender cues and individual motivations influence perceptions of credibility. *Journal of Computer Mediated Communication* 14(3): 435-456.

Armstrong, C. L. and M. J. McAdams. 2011. Blogging the Time Away? Young Adults' Motivations for Blog Use. *Atlantic Journal of Communication* 19(2): 113-128.

Banning, S. A. and K. D. Sweetser. 2007. How much do they think it affects them and whom do they believe?: Comparing the third-person effect and credibility of blogs and traditional media. *Communication Quarterly* 55 (4): 451–466.

Bar-Ilan, J. 2005. Information hub blogs. *Journal of Information Science* 31(4): 297-307.

Bennett, W. L. and S. Iyengar. 2008. A new era of minimal effects? The changing foundations of political communication. *Journal of Communication* 58(4): 707-731.

Benoit, P. J. and W. L. Benoit. 2005. Criteria for evaluating political campaign webpages. *Southern Communication Journal* 70(3): 230-247.

Bimber, B. 2000. The Study of Information Technology and Civic Engagement. *Political Communication* 17(4): 329-333.

Blumler, J. G. and D. Kavanagh. 1999. The third age of political communication: Influences and features. *Political Communication* 16(3): 209-230.

Blumler, J. G. and S. Coleman. 2010. Political Communication in freefall: The British case--and others? *The Harvard International Journal of Press/Politics* 15(2): 139-154.

Boyd, D. M. and N. B. Ellison. 2007. Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication* 13(1): 210-230.

Braaten, A. 2005. The great Canadian blog survey: A snapshot of the Canadian blogosphere in 2005. Edmonton: University of Alberta Press.

Carlson, M. 2007. Blogs and journalistic authority. *Journalism Studies* 8(2): 264-279.

Carpenter, C. A. 2010. The Obamachine: Technopolitics 2.0. *Journal of Information Technology & Politics* 7(2-3): 216-225.

Coleman, S. and S. Wright. 2008. Political blogs and representative democracy. *Information Polity* 13(1): 1-6.

Cox, A. M., P. D. Clough and J. Marlow. 2008. Flickr: a first look at user behaviour in the context of photography as serious leisure. *Information Research* 13(1). http://informationr.net/ir/13-1/paper336.html (accessed July 19th, 2011).

Dahlberg, L. 2004. Internet research tracings: Towards non-reductionist methodology. *Journal of Computer-Mediated Communication* 9(3): 1-28.

Dahlgren, P. 2005. The Internet, public spheres, and political communication: Dispersion and deliberation. *Political Communication* 22(2): 147-162.

Davis, R., J. C. Baumgartner, P. L. Francia and J. S. Morris. 2009. The Internet in US election campaigns. In *Routledge handbook of Internet politics.* ed. A. Chadwick and P. N. Howard. New York, Routledge.

Dutta-Bergman, M. J. 2004. Complementarity in consumption of news types across traditional and new media. *Journal of Broadcasting & Electronic Media* 48(1): 41-60.

Efron, M. 2006. Using cocitation information to estimate political orientation in web documents. *Knowledge and Information Systems* 9(4): 492-511.

Ekdale, B., K. Namkoong, T. K. F. Fung and D. D. Perlmutter. 2010. Why blog? (then and now): Exploring the motivations for blogging by popular American political bloggers. *New Media & Society* 12(2): 217-234.

Farrell, H., E. Lawrence and J. Sides. 2008. Self-segregation or deliberation? Blog readership, participation, and polarization in American politics. Paper presented at the annual meeting for the MidWest Political Science Association. Chicago, Illinois. April 3-6.

Flanagin, A. J. and M. J. Metzger. 2008. The credibility of volunteered geographic information. *GeoJournal* 72(3): 137-148.

Fournier, M. 2001. Quebec Sociology and Quebec Society: The Construction of a Collective Identity. *Canadian Journal of Sociology/ Cahiers canadiens de sociologie* 26(3): 333-347.

Fournier, M. 2002. Quebec sociology: A discipline and its objects. *The American Sociologist* 33(1): 42-54.

Foot, K. A. and S. M. Schneider. 2002. Online action in campaign 2000: An exploratory analysis of the US political web sphere. *Journal of Broadcasting & Electronic Media* 46(2): 222-244.

Foot, K. A., S. M. Schneider, M. Xenos and M. Dougherty. 2009. Candidates' Web practices in the 2002 US House, Senate, and Gubernatorial elections. *Journal of Political Marketing* 8(2): 147-167.

Giasson, T., V. Raynauld and C. Darisse. 2008. Cartographie de la blogosphère politique québécoise: Utilisateurs, messages et intentions. Paper presented at the preconference of the International Communication Association. Montreal, Québec. May 22-26.

Giasson, T., V. Raynauld and C. Darisse. 2009. Political bloggers and civic involvement: Why the Quebec experience matters. Paper presented at the annual meeting for the MidWest Political Science Association. Chicago, Illinois. May 2-5.

Gil de Zúñiga, H. 2009. Blogs, journalism, and political participation. In *Journalism and citizenship: new agendas in communication.* ed. Z. Papacharissi. New York: Routledge.

Gil de Zúñiga, H., A. Veenstra, E. Vraga and D. Shah. 2010. Digital democracy: Reimagining pathways to political participation. *Journal of Information Technology & Politics* 7(1): 36-51.

Gil de Zúñiga, H., E. Puig-I-Abril and H. Rojas. 2009. Weblogs, traditional sources online and political participation: An assessment of how the Internet is changing the political environment. *New Media & Society* 11(4): 553-574.

Gil de Zúñiga, H., S. C. Lewis, A. Willard, S. Valenzuela, J. K. Lee and B. Baresch. 2011. Blogging as a journalistic practice: A model linking perception, motivation, and behavior. *Journalism* 12(5): 586-606.

Glaser, M. 2004. To their surprise, bloggers are force for change in big

media. *Online Journalism Review.*

Gruszczynski, M. W. 2009. Cheerleaders, or Denigrators? Bias, Partisan Blogs, and the 2008 Presidential Campaign. Paper presented at the annual meeting for the Great Plains Political Science Association. Sioux City, Iowa. October 17.

Hanson, G., P. M. Haridakis, A. W. Cunningham, R. Sharma and J. D. Ponder. 2010. The 2008 Presidential Campaign: Political Cynicism in the Age of Facebook, MySpace, and YouTube. *Mass Communication and Society* 13(5): 584-607.

Hargittai, E., J. Gallo and M. Kane. 2008. Cross-ideological discussions among conservative and liberal bloggers. *Public Choice* 134(1): 67-86.

Herring, S. C., I. Kouper, J. C. Paolillo, L. A. Scheidt, M. Tyworth, P. Welsch, E. Wright and N. Yu. 2005. Conversations in the blogosphere: An analysis from the bottom up. Proceedings of the 38th Hawaii International Conference on System Sciences.

Hine, C. 2005. *Virtual methods.* Surrey: Berg Publishers.

Hookway, N. 2008. Entering the blogosphere: Some strategies for using blogs in social research. *Qualitative Research* 8(1): 91-113.

Hopkins, D. J. and G. King. 2010. A method of automated nonparametric content analysis for social science. *American Journal of Political Science* 54(1): 229-247.

Institut de la statistique du Québec. 2009. Estimation de la population des régions administratives, 1er juillet des années 2006 à 2008. Québec: Institut de la statistique du Québec.

Iosifidis, P. 2011. The public sphere, social networks and public service media. *Information, Communication & Society* 14(5): 619-637.

Jankowski, N. W. and M. Van Selm. 2008. Internet-based political communication research: Illustrations, challenges & innovations. *The Public* 15(2): 5-16.

Johnson, T. J. and B. K. Kaye. 2004. Wag the blog: How reliance on traditional media and the Internet influence credibility perceptions of weblogs among blog users. *Journalism & Mass Communication Quarterly* 81(3): 622-642.

Johnson, T. J. and B. K. Kaye. 2009. In blog we trust? Deciphering credibility of components of the internet among politically interested internet users. *Computers in Human Behaviour* 25(1): 175-182.

Johnson, T. J., B. K. Kaye, S. L. Bichard and W. J. Wong. 2008. Every blog has its day: Politically-interested Internet users' perceptions of blog credibility. *Journal of Computer-Mediated Communication* 13(1): 100-122.

Jones, J. and I. Himelboim. 2010. Just a guy in pajamas? Framing the

blogs in mainstream US newspaper coverage (1999-2005). *New Media & Society* 12(2): 271-288.

Kaid, L. L. and M. Postelnicu. 2006. Credibility of political messages on the Internet: A comparison of blog sources. In *Blogging, Citizenship and the Future of Media*. ed. M. Tremayne. New York: Routledge.

Karpf, D. 2008. Understanding blogspace. *Journal of Information Technology & Politics* 5(4): 369-385.

Kautsky, R. and A. Widholm. 2008. Online methodology: Analysing news flows of online journalism. *Westminster Papers in Communication and Culture* 5(2): 81-97.

Kaye, B. K. 2010. Going to the blogs: Toward the development of a uses and gratifications measurement scale for blogs. *Atlantic Journal of Communication* 18(4): 194-210.

Kaye, B. K. and T. J. Johnson. 2004. A Web for all reasons: uses and gratifications of Internet components for political information. *Telematics and Informatics* 21(3): 197-223.

Kaye, B. K. and T. J. Johnson. 2011. Hot diggity blog: A cluster analysis examining motivations and other factors for why people judge different types of blogs as credible. *Mass Communication and Society* 14(2): 236-263.

Kenix, L. J. 2009. Blogs as alternative.

Journal of Computer Mediated Communication 14(4): 790-822.

Kim, D. and T. J. Johnson. In press. Political blog readers: Predictors of motivations for accessing political blogs. *Telematics and Informatics.*

Kim, S. T. and D. Weaver. 2002. Communication research about the Internet: A thematic meta-analysis. *New Media & Society* 4(4): 518-539.

Kreiss, D. and P. N. Howard. 2010. New challenges to political privacy: Lessons from the first US Presidential race in the Web 2.0 era. *International Journal of Communication* 4: 1032-1050.

Larsson, A. O. and S. Hrastinski. 2011. Blogs and blogging: Current trends and future directions. First Monday 16(3). http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/viewArticle/3101/2836#author (accessed July 23rd, 2011)

Latimer, C. 2009. Understanding the complexity of the digital divide in relation to the quality of House campaign websites in the United States. *New Media & Society* 11(6): 1023-1040.

Lee, Y.-O. and H. W. Park 2010. The reconfiguration of e-campaign practices in Korea: A case study of the Presidential primaries of 2007. *International Sociology* 25(1): 29-53.

Lenhart, A., K. Purcell, A. Smith and K. Zickuhr. 2010. Social media

and young adults. PEW Internet & American Life Project. http://pewresearch.org/pubs/1484/social-media-mobile-internet-use-teens-millennials-fewer-blog (accessed July 19th, 2011)

Lev-On, A. and R. Hardin. 2008. Internet-based collaborations and their political significance. *Journal of Information Technology & Politics* 4(2): 5-27.

Li, D. and G. Walejko. 2008. Splogs and abandoned blogs: The perils of sampling bloggers and their blogs. *Information, Communication & Society* 11(2): 279-296.

Livingstone, S. 2004. The challenge of changing audiences: Or, what is the audience researcher to do in the age of the Internet? European journal of communication 19(1): 75-86.

MacDougall, R. 2005. Identity, electronic ethos, and blogs. American Behavioral Scientist 49(4): 575-599.

Margolis, M. and D. Resnick. 2000. Politics as usual: The cyberspace. Thousand Oaks, CA: Sage.

Margolis, M., D. Resnick and J. D. Wolfe. 1999. Party competition on the Internet in the United States and Britain. *The Harvard International Journal of Press/Politics* 4(4): 24-47.

McKenna, L. and A. Pole. 2008. What do bloggers do: An average day on an average political blog. *Public Choice* 134(1): 97-108.

Meraz, S. 2009. Is there an elite hold? Traditional media to social media agenda setting influence in blog networks. *Journal of Computer Mediated Communication* 14(3): 682-707.

Metzger, M. J., A. J. Flanagin and R. B. Medders. 2010. Social and heuristic approaches to credibility evaluation online. *Journal of Communication* 60(3): 413-439.

Morris, M. and C. Ogan. 1996. The Internet as mass medium. *Journal of Communication* 46(1). http://jcmc.indiana.edu/vol1/issue4/morris.html (accessed September 15th, 2011)

Munson, S. A. and P. Resnick. 2011. The prevalence of political discourse in non-political blogs. Paper presented at the Fifth International AAAI Conference on Weblogs and Social Media. Barcelona, Spain. July 17-21.

Nancarrow, C., J. Pallister and I. Brace. 2001. A new research medium, new research populations and seven deadly sins for Internet researchers. *Qualitative Market Research: An International Journal* 4(3): 136-149.

Nardi, P. M. 2006. *Doing survey research: a guide to quantitative methods.* Boston: Pearson/Allyn & Bacon.

Park, D. W. 2009. Blogging with authority: Strategic positioning in political blogs. *International Journal of*

Communication 2: 250-273.

Park, H. M. and J. L. Perry. 2008. Do campaign web sites really matter in electoral civic engagement? *Social Science Computer Review* 26(2): 190-212.

Park, H. W. and M. Thelwall. 2008. Developing network indicators for ideological landscapes from the political blogosphere in South Korea. *Journal of Computer-Mediated Communication* 13(4): 856-879.

Payne, J. G. 2010. Introduction to 2008 Presidential Campaign Issues. *American Behavioral Scientist* 54(3): 159-162.

Perseus. 2004. The blogging iceberg: Of 4.12 million hosted weblogs, most little seen and quickly abandoned. Perseus. http://www.perseusuk.co.uk/survey/news/releases/release_blogs.html (accessed July 20th, 2011).

Roman, D. 2011. Scholarly publishing model needs an update. *Communications of the ACM* 54(1): 16-ff.

Schmidt, J. 2007. Blogging practices: An analytical framework. *Journal of Computer-Mediated Communication* 12(4): 1409-1427.

Schneider, S. M. and K. A. Foot. 2004. The web as an object of study. *New Media and Society* 6(1): 114-122.

Serfaty, V. 2011. Passionate intensity: Political blogs and the American

journalistic tradition. *Journal of American Studies* 45(02): 303-316.

Siapera, E. 2008. The political subject of blogs. *Information Polity* 13(1): 51-63.

Sifry, D. 2007. The state of the live Web, April 2007. http://www.sifry.com/alerts/archives/000493.html (accessed July 19th, 2011).

Skoric, M. M., D. Ying and Y. Ng. 2009. Bowling online, not alone: Online social capital and political participation in Singapore. *Journal of Computer Mediated Communication* 14(2): 414-433.

Smith, P. J. and P. J. Chen. 2009. A Canadian e-lection 2008? Online media and political competition. Paper presented at the annual meeting for the Canadian Political Science Association. Ottawa, Ontario. May 27-29.

Strandberg, K. 2008. Online campaigning: an opening for the outsiders? An analysis of Finnish parliamentary candidates' websites in the 2003 election campaign. *New Media & Society* 11(5): 835-854.

Su, N. M., Y. Wang and G. Mark. 2005. Politics as usual in the blogosphere. Proceedings of the 4th International Workshop on Social Intelligence Design.

Sweetser, K. D. and L. L. Kaid. 2008. Stealth soapboxes: Political information efficacy, cynicism and uses of celebrity weblogs among

readers. *New Media & Society* 10(1), 67-91.

Trammell, K. D. 2005. Looking at the pieces to understand the whole: An analysis of blog posts, comments, and trackbacks. Paper presented at the annual meeting for the International Communication Association. New York City, May 26-30.

Trammell, K. D. 2007. Candidate campaign blogs: Directly reaching out to the youth vote. *American Behavioral Scientist* 50(9): 1255-1263.

Trammell, K. D. and A. Keshelashvili. 2005. Examining the new influencers: A self-presentation study of A-list blogs. *Journalism & Mass Communication Quarterly* 82(4): 968-982.

Tyler, T. R. 2002. Is the Internet changing social life? It seems the more things change, the more they stay the same. *Journal of Social Issues* 58(1): 195-205.

Verdegem, P. 2011. Social media for digital and social inclusion: challenges for information society 2.0 research & policies. *tripleC-Cognition, Communication, Co-operation* 9(1): 28-38.

Vergeer, M. and L. Hermans. 2008. Analysing online political discussions: Methodological considerations. *The Public* 15(2): 37-56.

Wallsten, K. 2005. Political blogs and the bloggers who blog them: Is the political blogosphere and echo chamber. Paper presented at the annual meeting for the American Political Science Association. Washington D.C. September 1-4.

Wallsten, K. 2007. Agenda setting and the blogosphere: An analysis of the relationship between mainstream media and political blogs. *Review of Policy Research* 24(6): 567-587.

Wallsten, K. 2008. Political blogs: Transmission belts, soapboxes, mobilizers, or conversation starters? *Journal of Information Technology & Politics* 4(3): 19-40.

Wei, L. 2009. Filter blogs vs. personal journals: Understanding the knowledge production gap on the Internet. *Journal of Computer Mediated Communication* 14(3): 532-558.

Wellman, B. 2004. The three ages of internet studies: ten, five and zero years ago. *New Media and Society* 6(1): 123-129.

Woodly, D. 2008. New competencies in democratic communication? Blogs, agenda setting and political participation. *Public Choice* 134(1): 109-123.

Wright, K. B. 2005. Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication* 10(3). http://jcmc.

indiana.edu/vol10/issue3/wright.
html (accessed July 19th, 2011)

Zamaria, C. and F. Fletcher. 2007.
The Internet, media and emerg-
ing technologies: Uses, attitudes,
trends and international com-
parisons 2007. *Canadian Internet
Project.*

Zickuhr, K. 2010. Generations 2010.
Pew Internet & American Life
Project.   http://pewinternet.org/
Reports/2010/Generations-2010.
aspx (accessed July 19th, 2011)

Young Nostalgics: Why, Where, and How to Analyze Postmodern Constructions of 'Pastness' in Contemporary Youth Blogs

Gabriel Munteanu

Derived from the premises of ongoing doctoral research, this article will address the epistemological and technical methodological challenges raised by a qualitative analysis of 'nostalgic' online photographic journals. Following a general justification of the research and a theoretical contextualization, the discussion focuses on the eclectic methodological framework that the author proposes to use, from discursive textual analysis and photographic semiology to interviews. Conceptual ambiguities, research lacunas, practical problems, a lack of reflexivity in the field and a shift in the nature of contemporary blogs are additional critical points that the author discusses. Concluding the article is a brief, caseinpoint presentation of the immensely popular 'nostalgic / retro / vintage' blog '.la douleur exquise.' (misswallflower.tumblr.com), designed by a 20 year old Georgian girl and followed, as of February 2011, by over 50,000 distinct Internet users.

Keywords: tumblr.com, microblogs, online visual semiology, content analysis, nostalgia

The Young Nostalgics
Contextualizing an Idiosyncratic Internet Find

In consulting almost any book on 'youth culture', be it from the old Chicago School tradition of urban delinquency studies (e.g., Park & Burgess 1925; Thrasher 1927), popular subcultural theory (e.g., Hebdige 1979), or the fashionably Bourdieusian ethnographies documenting the (sub)cultural capital of today's fragmented 'club cultures' (Thornton 1995) and the semiotic value of 'lifestyle' in consumer societies (Miles 2000), we find young people associated with the present. We also find them organically connected with the future's dauntingly 'global', 'changing', and often 'unprecedented' challenges. This appears to be a matter of common sense, an unremarkable academic reflection of a social axiom — the

natural assumption that it must be the next generation, the forward-looking, momentgrabbing, techno-savvy stylistical consumers of today that personify our tomorrow.

After several months of browsing the Internet, I found sufficient evidence to challenge these assumptions. This study examines idiosyncratic exceptions to these otherwise apparently valid rules. When one finds a 20 yearold girl utterly fascinated with the aesthetics of sepiatoned photographs, fin-de-siècle philosophy and vintage clothing, another 18 year old with very similar visualaffective interests (to which she adds a special predilection for all fashions retroParisian), or yet another young girl enamoured with 'dejavu' and childhood imagery, the relationship between youth, memory, present and past takes on a much more ambiguous dialectical aura.

All of these individuals, their interactive cultural statements and visual identities exist, to the eye of the researcher and of the world, exclusively online. The space in which they choose to visually articulate their thoughts is synesthetic, in constant flux, and, rather interestingly, is almost entirely 'borrowed' from somewhere else. All use the relatively recent microblogging platform tumblr.com and spend hours on end 'hunting' the Web for things that, quite simply, catch their eye. The often spectacular results of such compilations are 'microblogs', or tumblrs — collections of hypermedia content open to the public as a novel type of visual journal. The combination of nostalgic, 'vintage' imagery (probably most evident in the warm colour palette and oneiricRomantic scenery created by the photographs, animations, evocative quotations and brief video clips), with the ultramodern, technoeclectic online medium of what is probably the fastest growing and best articulated microblogging platforms currently in existence, makes up for a very idiosyncratic environment.

To devise a coherent, credible methodology with which to approach these cases can be challenging. First of all, the methods of inquiry need to be adapted to the research questions. What exactly does one want to analyze, and why? Only after briefly clarifying these points will I be able to explain how and which hermeneutical path I followed.

Why and What is Analyzed?

In generic terms, I aim to theoretically contextualize and qualitatively investigate what I have previously identified as seemingly paradoxical cases of young people's online journals displaying an (often selfdeclared) nostalgic predilection (aesthetic, psychological, sartorial, cultural) towards one form or another of 'pastness'. What can explain these young persons' longing for an immaterial past that they have never personally experienced? How is this past 'vicariously' constructed and

imagined, what psychological function does it serve and in what ways does it interact with the 'mainstream' present's incontestable materiality? Where in the nebulous web of late modern poststructuralist theory can we situate these cases and how can we interpret them?

Drawing on critical postmodern theorists such as Jameson (1985; 1991) and, to a lesser degree, Baudrillard (1981), my research investigates the ways in which these cultural expressions connect with what the above writers have described as a postmodern crisis of memory and historicity. In this sense, presentday popular culture has been described as a sterile pastiche "in which stylistic innovation is no longer possible [and] all that is left is to imitate dead styles, to speak through the masks and with the voices of the styles in the imaginary museum" (Jameson 1985, 115; see also Jameson 1991). Similarly, Jean Baudrillard described the Western popular culture machinery as producing 'simulations' and 'simulacra' that not only obfuscate, but virtually erase their own referential origin, thus creating 'copies without originals' and a society from which "history has retreated, leaving behind it an indifferent nebula, traversed by currents, but emptied of references" (Baudrillard 1981, 46).

In this context, my intention is to investigate whether cases such as those briefly described above reflect young persons' idiosyncratic

attempts to resolve these dilemmas, to recover Baudrillard's 'lost references' — to be(come), as it were, authentically 'authentic'. For it is the absence of 'authenticity', its commodified relativization and the dissolution of all culturalsocialaesthetic hierarchies that these critics of postmodernity contentiously deplore.

The Internet, Blogs and Social Research: What Is (Not) Known?

It is recognized that the Internet is a new, rich space for social research, with a number of volumes dedicated to understanding and addressing the many methodological and theoretical challenges that the medium puts forth (e.g., Jones 1999; Hewson et al 2003; Hine 2003; Hine 2005; Kozinets 2010). These, and other scholarly efforts focus largely (and opportunely) on discussing the applications, or adaptations of 'traditional' culturalanthropological methodologies (e.g.: interviews Beck 2005; focus groups – Franklin & Lowry 2001; ethnographic observations – Hessler et al 2003) to 'untraditional' environments (e.g., chatrooms, forums, e-mail exchanges, bulletin boards), while also discussing ethical and anonymityrelated implications.

In attempting to essentialize the main research directions, or social research potential of the Internet, Silver (2000) proposes two main 'pillars of cybercultural studies': identities and virtual communities. The most popular form of online

selfexpression, the 'blog' (or the 'weblog'), arguably brings these elements together in a tightlyknit spiral of identity reflection and generation. However, the 'blogosphere', the virtual spatial totality of all existent public blogs, remains an area rich in qualitative data that has yet to be fully recognised by socialcultural researchers (Hewson 2003; Hookway 2008). Indeed, much of the initial online research seems to have positively, yet 'quantitatively' exploited the Internet as a generic datagathering and dataproducing medium (Coomber 1997; Best et al 2001; Solomon 2001). Considered by some authors as the "next evolution of webbased experience" (Kahn & Kellner 2004, 91), the blog, and its psychosociocultural analysis, poses nonetheless several (qualitative) challenges, some of which are arguably unique to the medium in question. One is its exponential increase in popularity and easeofuse, the other, its rapidly shifting nature. These are two characteristics that are perhaps most salient in the case of my own research, and which I will therefore briefly explore below. First, however, a few words on why blogs (should) matter to cultural scientists.

In a highly informative article aiming to introduce the 'blogosphere' to the social researcher, Hookway (2008) lists many substantial benefits that the analysis of online journals generally provide to the academic community: public availability; low research costs; instan-taneous collecting of large amounts of data; access to fully anonymous, thus less selfconscious participants; access to otherwise geographically or socially removed subjects; the ability to empirically and/or comparatively discuss issues regarding the phenomenon of globalization; the ability, on account of their archived nature, to conduct trend and paneltype longitudinal research; and finally, the advantageous fact that blogs offer significant insight into the space and time of everyday life (Hookway 2008, 9293). Although Hookway's article is relatively recent (2008), some of his other observations are already out of date, or limited in scope — facts clearly connected with what I earlier identified as two essential changing attributes of contemporary blogs (i.e., a large increase in popularity and a change in their nature). For example, Hookway mentions NITLE's (National Institute for Technology and Liberal Education) extremely modest, if not completely unreliable estimate of 2.8 million existent blogs, while his more 'liberal' statistics range between 31.6 and 100 million blogs (Hookway 2008, 93). On October 2nd, 2011, the reputable, Nielsen Companyowned BlogPulse.com identified a total of 172,659,256 blogs (with more than 20,000 new blogs created each day, and approximately 1,000,000 blog posts published daily!). Secondly, and perhaps even more importantly, the very 'definition' of a blog may

need, with the advent of microblogging platforms such as Twitter, Tumblr, Plurk, Formspring, several amendments. The typically linear, primarily textual, daily/monthly/yearly archived blog(entries) of the earlier decade, light on links and focusing on the drama of "everyday interactions, selves and situations" (Hookway 2008, 94) are becoming more hybrid, more interconnected, more visually/synesthetically oriented, and provide tools for realtime social interactions. For example, with more than a million Twitter accounts in existence, and three billion userrequests everyday, the 140character limited Twitter 'blog' posts get instantly followed, republished, and commented upon by thousands of users every second, creating a veritable microcosmos of how, where, and what is happening in the world every minute. Furthermore, completely 'hypermediatized' platforms such as Tumblr.com often do completely without conventional textual inputs or even time stamps, offering weblogs that resemble individual 'streams of virtual consciousness', compiled of pictures, animations, quotes, videoclips and other multimedia artefacts. These inputs are either individually uploaded by the user, or are many times simply and seamlessly linked from somewhere else (be it another tumblr, an online photo gallery, YouTube etc.). Considering that what I have previously identified and described as nostalgic online diaries make almost exclusive use of the Tumblr platform, further attention will be given to describing this medium in a later, dedicated section of this article. Finally, I would like to again draw attention to the paucity of qualitative (micro)bloggingoriented studies. The few general analyses that tackle the 'blogosphere' are usually aimed at investigating blogging aspects related to participatory journalism (Wall 2005; MacDougall 2005), civic commitment (Kerbel & Bloom 2005), the production of educationoriented knowledge (Brooks et al 2004; Sade 2005), and business/corporaterelated activities (Festa 2003; Scammel 2006).

Youth and the Internet. Bridging Theory with Methodology

While studies that examine young people's cultural behaviours in online environments exist, the majority of these projects have little or nothing in common with my own stated purposes (nostalgia, online constructions of pastness) and chosen loci of investigation (microblogs). Even when the modern cultural ethnographers move away from the popular street, festival or club arenas, they usually work within the 'subcultural' paradigm of 'rebellious' youth. [1] Unsurprisingly, therefore, we read about the 'subcultural' resistance manifested in Internet forums, chat rooms and various online communities of (post)punk actors (e.g., Pileggi 1998; Helton & Staudenmaier 2002; Williams 2003;

Hodkinson 2002). Alternatively, the tensions between 'authentic' DIY (Do it Yourself) virtual activities and the increased commercialization of online music spaces are explored (Haenfler 2006).

While these studies do not seem to, and, in certain key respects, do not match my own research focus and context, they are important in that they reflect a methodological 'metamodel' that I think defines many contemporary cultural studies in general. Therefore, in order to coherently connect postmodern debates on memory and authenticity with my own particular view of tumblr youthculture, usercentred newmedia and Internetstudies, I will subscribe to the versatile research 'tradition' that, in the face of increasing lifestyle fragmentation and an alleged decreased importance of social class, focuses on bodies rather than characters; on discourse rather than ideology; on the minutiae of appearance rather than patterns of substantiality; on Barthes, Derrida and Foucault, rather than Marx, Gramsci or Adorno (Thornton 1990, 1995; Muggleton 2000; Andes 1998; Lull 1987; Sardiello 1998; McRobbie 1989). Again, all of these 'style'centred studies deal mainly with music, fashion and the various interactions between youth 'resistance' and a dominant 'mainstream' culture (which, in fact, is a quintessential trope of the subcultural paradigm). As I will underline in later paragraphs, these are all dimen-

sions either virtually absent, or fundamentally transformed2 in and by the online medium upon which my research focuses. Inevitably, therefore, I subscribe to Steven Miles' observation that not all young people are "submerged in the melodrama of subcultural life or the terrors of drug addiction and alcohol consumption" (Miles, 2000, p. 3). Hence to the same author's pertinent appeal for a refocusing of attention (from subculture and delinquency paradigms) to the degree of complexity found in the lives of 'normal' young persons. Furthermore (and this point is also echoed by youthresearchers such as Sabin (1999), Thornton (1995) or Muggleton (2000), too often researchers have allowed (have preferred?) a priori grandtheoretical structures to frame, shape and delineate narratives of youth that seem to exist mainly in the elegant pages of one research or another.

My study tries to evade these dangers by starting the analysis in an exploratory vein, working from preliminary empirical, observational online data towards speculative possibilities of framing these observations within a credible theoretical context (and not the other way around). In fact, I believe that the Internet itself, being a destructured, ultraversatile, fast changing, anthropomorphic medium, renders highly problematic any traditionally 'deductive', or theoretically a priori attempt to categorize it. Finally, like any cultural study, my research too

is eclectic in the methods it will employ. Drawing freely from across the liberal arts, humanities and social sciences, I will deal with "methodologies rather than a single methodology", and make the methods serve "the aims of the research and not the research serve the aims of the method" (McGuigan 1997, 2). Nonetheless, as will become evident from the methodological choices I discuss below, I agree fully with a suggestion made by Rice and Williams as early as 1984: "we need not jettison useful communication theories when we wish to understand new media … [we need to] further specify and modify these theories, [and] look at those traditional theories untraditionally" (Rice & Williams 1984, 56, 80). In this sense, despite the fact that both textual discourse analysis and photographic semiology are firmly rooted in 'pre-digital' theorizing (e.g., Foucault 1979; Barthes 1975), I will argue below that these are methods which can be adapted and applied to the study of online environments without in any way becoming compromised or inadequate.

Discussing Methodologies. A Call for Online Case Studies.

I use the term 'case studies' to refer to ethnographic research that investigates several cases in considerable depth. Being an anthropic, socially interactive medium, the Internet is implicitly an ethnographic space, one that fully lends itself to judicious, flexible ethnographical inquiries (as also suggested by Jones 1999; Hine 2003, 2005; Kozinets 2010). The cases I have chosen are constructed out of naturally occurring situations (unlike the variable manipulations of an experimental approach), and imply the collection of unstructured data, plus the qualitative analysis of this data (Gomm et al 2000). To use Robert Stake's (1995) wellestablished taxonomy, I consider each proposed bloganalysis an 'intrinsic' case study, one that is interesting in itself and that will be approached in considerable detail, the researcher having a genuine interest in understanding its sui generis significance.

The apparently paradoxical nature of a young person's nostalgic predilection for vicariously constructed forms of 'pastness', the interesting possibilities of contextualizing this phenomenon through the lens of postmodern critiques of historicity and memory, and the novel modalities through which hypermedia and online environments enable individuals to interactively express themselves all add up to the 'intrinsic' value of such cases. It is also true that, in choosing more than one case and in suggesting that a certain type of 'nostalgic' valance is a shared feature among all my exemplifications, I am simultaneously working within a framework that Yin (2003, 47) would describe as 'multiple case studies'. This adds to the methodological equation the use-

ful possibility of drawing intercase comparisons, while also assuring a relative, tentative degree of general findingsreplicability (an attribute intrinsic case studies are notorious for lacking). Considering, however, the very recent, volatile and virtually uncharted terrain that my study investigates, I would consider any additional claims concerning the potential generality, or higher social contextualization of the analyzed websites, premature. For example, the most popular blog included in my analysis (Marie Menabde's misswallflower.tumblr.com, with over 50,000 individual followers) is not only the one that sparked my (initially personal, then professional) interest in understanding its aesthetics, discourse and general 'rhetorical' construction, but also the one that creates a number of 'emulations' within the blogging platform itself (i.e., users who were inspired by Marie's website and created their own tumblr). It is, however, difficult, at this stage, to establish a larger, fuller picture of what could possibly be(come) a 'neonostalgic' current within the 'tumblrsphere'.

Reflectivity and the Construction of a Methodological Apparatus

What I subsequently termed the essentially 'nostalgic' online photographic journal misswallflower.tumblr.com was discovered by me accidentally, in the autumn of 2010. I did not realize, at that time, that tens of thousands of people followed it

regularly, or that it would become (together with a number of similar blogs) the focus of my research. As I imagine many of Marie's followers did, I browsed through its content simply because I liked the website's alluringly aesthetic consistency and its ability to create an indefinable, wistful mood. These facts in themselves betray the initial 'reflective' nature of this project, a reflectivity which I believe is a dimension as unavoidable as it is benign (and, in fact, ubiquitous in most qualitative cultural studies). Finally, upon consultation with other research colleagues and academics (the reflectivity of whom seemed to fortunately overlap mine, thus instilling the project with credibility) I decided to try and understand how, and potentially why these 'cultural statements' (McRobbie 1993) were performed.

Following a 'snowball' sampling (i.e., a non-probability sampling technique where an original subject's context, in this case 20 year old Marie's misswallflower.tumblr.com, redirected me to additional sources), I have so far identified five microblogs (misswallflower.tumblr.com; feelslikedejavu.tumblr.com; lastmemory.tumblr.com; lilpokerface.tumblr.com ; voixdouce.tumblr.com). They were chosen based on thematic and occasionally interpersonal (e.g., feelslikedejavu's tumblr belongs to a close, real life friend of Marie's) similarities. Each intrinsic case study will rely upon two separate types of methodologies. One

is more hybrid, rooted in semiological epistemology and media studies, while the other takes on a more ethnographicalempirical route, proposing the conduction of (online/ offline) interviews. In what follows, I will sketch out the details of both these methodological constructions. Needless to say, they are intended to be complementary and synergic.

The first level of the examination is a critical visualtextual deconstructive analysis of the blogs' hypermedia. This hybrid, qualitative methodology includes:

A) A Foucaultian (1979; 2002) Barthian (1975) discourse/literary analysis, approaching the textual material as an openended, nonlinear discursive entity, dialectically engaged within the social, aesthetic and stylistical realms of contemporaneity. All the aphoristical quotes, literary excerpts or personal journal entries extracted from each analyzed tumblr can, and will be used to "understand the relation between the www text [and, implicitly, its 'owner/subject'] and society, just as the structural analysis of the text … can be conducted to uncover the ways in which it takes on specific meanings" (Mitra & Cohen 1999, 199). Independent of this conventionally destructuring approach, however, are onlinespecific issues that the virtual material cannot be stripped of. These include its decentralized intertextuality (e.g., do we analyze

the potential hyperlinked content the text may point at, or not?), 'multimediacy' (some texts are embedded in images or viceversa), international dimension, ambiguous authorship and uncertain 'physical' status, or what some authors call its "impermanence" (ibid.). Only by combining offline archival solutions with what I earlier quoted as necessary untraditional approaches towards traditional methods (and I believe that most forms of 'discursive analyses' add up to an eclectic collection of criticalrhetorical crafts 'traditionally' used by poststructuralist researchers to analyze a large variety of 'conventional' texts) can one surmount these critical points. My analysis thus takes up the challenge of "offering the opportunity to reexamine the methods that have worked well with traditional texts and consider how the methods themselves can be modified to address the emerging [online] textual form" (ibid.). In this sense, I concur with many discourse analysts who suggest that a successful study depends less on rigidly rigorous procedures, and more on 'common sense', craft skill (Potter 1996, 140), general scholarship (Gill 1996) and personal interpretative sensibilities (Phillips & Hardy 2002).

B) While the analysis of text remains important, it is the predominantly visual dimension of both the Internet as a whole, and the 'nostalgicity' of the analyzed tumblrs spe-

cifically, that pose the most interesting methodological questions.

Scholars such as Scheid & Wright (2004) also underline the importance of the visuallyexpressive dimension of blogs, albeit addressing in their research what could be considered 'background' blog variables (user icons, template selections, blog design, colour schemes, titles, sidebars, widgets and typeface). Badger (2004, 1) takes a tentative step further and compares weblogs with "homepages that we wear, … [with] the visual elements tailor[ing] the garment to fit the individual". Badger also interestingly tries to place the Internet in a predominantly visual realm, as something we 'glance at', rather than simply read (ibid.). Nonetheless, such studies pivot around the relatively mainstream, conventionally tailored blogs, where images and 'background' visual elements are used to complement, enrich, or contextualize the otherwise prioritized textual dimensions. In this sense, photographs remain essentially secondary, and always contingent to the text.

In the case of tumblrs, however, it is clear that the visual/multimedia aspect of the weblogs becomes prioritized, often to the detriment of conventional 'journal entries'type of textual material. If, in the blogs analyzed by Badger (2004, 7), images establish a connection between places and the voice of the blogger, my tumblr subjects use hypermedia to create a sense of place, space and voice at the same time. If we are to strip a conventional blog of its text, the images would appear lost, random and fragmentary. If we would, however, apply the same treatment to one of the tumblrs in question, the microblog's coherence, narrative (a visual narrative, ambiguous, vague and in constant flux, but a narrative nonetheless) and sense of intrinsicality would persist. In cases such as these, Andrew Darley's remark that the ability to easily reproduce images online can make the result seem less precious/less unique is almost turned on its head (Darley 2001, 125).

To try and penetrate this multi-layered context, I propose to use a critical visual hermeneutics based on compositional interpretation, photographic semiology and a personalized form of content analysis (see also Gillian Rose's excellent Visual Methodologies, 2007). Aside from Rose's (2007) efforts, theorists such as Darley (2001, 193) also try to critically describe and place into a contemporary cultural context the digital 'aesthetics of the sensual', and how the online 'poetics of surfaceplay' are to be understood and integrated into the textures and experiences of (post)modern digital imagery.

Compositional interpretation, a term coined by Rose (2007) and derived from High Art critique (e.g., Rogoff 1998), is useful in the case of tumblrs because it may crucially

identify, using a critical "good eye's" ability to recognize the expressive dimension of a photograph, what more than 50,000 virtual gazes constantly return to (in the case of misswallflower's tumblr). Without really being methodologically explicit, compositional analysis offers a subtle hermeneutical path into an image's meaningful ensemble of signs. Particularly relevant in this case, where at stake is the review of thousands of incredibly diverse, yet nonetheless 'nostalgicallyfused' photographs, is the method's attention to colour. On a number of occasions, it has been suggested by people to whom I've introduced the blogs that a constant visual variable within all the tumblrs I analyze is their 'colour palette'. Indeed, if we were to chromatically describe 'nostalgia' (a term which I will discuss in more detail below), we would probably ascribe to it the various sepia tones of a Daguerreotype, or the blurry pastels of old photographs, or simply the diffuse, semioneiric shades that almost transcend their individual photographic sources and give these websites their elusive charm.

In order, however, to make methodologically consistent sense of this type of imagery, both modern semiology and content analysis provide us with invaluable tools. In this sense, I propose to combine Barthes' (1982) system of photographic semiology with the sampling and coding procedures offered by more traditional forms of content analysis (e.g. Krippendorf 1980; Lutz & Collins 1993). Barthes' work is known for its insightful, creative and highly discerning capabilities to probe beyond images' basic signifier/signified dynamics. The Barthian concept of 'punctum', describing an expressive, metanarrative dimension of certain photographs, or the socalled 'feel' of an image, is particularly salient here (Rose 2007, 89). For example, a Parisian sunset captured, decades ago, with a Polaroid camera , its beautifully frozen rays of incandescent light still melting on the Champ de Mars, is not just an image of the sun, of a city, or of a famous landmark. It contains a 'punctum' of its own, which bruises our perception and has the ability to hijack our memory's vicarious ability to emulate affect. As a Barthian scholar beautifully remarks, it is "those details that reside outside photographer's intention or the viewer's expectation that hold the most potential to wound. Existing beyond an academic or conventional framework, beyond the 'codes' that determine the photograph's general reading, these details point to the very heart of photography – the project of freezing in time what will ultimately be destroyed" (West 2000, 146). Indeed, by 'scavenging' the photographs from all possible online venues (other blogs, photography sites, printscreened movie stills, scanned artefacts, webcam or cameraphone shots, etc.) my 'tum-

blrers' forever divorce the author from the authored, the photographer from the photograph, thereby dissolving original intentionality and implicitly celebrating what can arguably be called an undiluted Barthian 'punctum', or the metaexpressive signified, of the original images.

Nonetheless, there is also consistency here, and not just a random effluvium of 'stolen' memories (however aesthetic, or touching, they might be). If some form of consistency, or visual coherence, did not exist, I doubt these tumblrs would have ever appealed to anyone, including their owners. To pin down this coherence, to submit it to a methodical process of psychocultural analysis, I use similar coding mechanisms to those put forth by content analysts (see Rose 2007, 5977; also, Schreier 2011). This will help me systematically establish possible 'expressive patterns' that, when one familiarizes herself or himself with these blogs, can also be picked up intuitively.

An important source of methodological inspiration, in this sense, can be found in Nancy West's exemplary study Kodak and the Lens of Nostalgia (2002), where she uses similar psychocultural visual deconstructive methods to identify in early Kodak Advertisements five nostalgic motifs (which are, in fact, condensed reflections of the codes she used to analyze the images' content): 'leisure', 'childhood', 'fashion', 'antiques' and 'narrative' (West 2002, 2). By coding and attributing keywords to a sample of randomly extracted images from each tumblr, I, too, attempt to disentrench the 'nostalgic' themes that I believe are entangled within all of these microblogs (e.g., "oneiricism", "retro cinema", "vintage fashion", "childhood sensorialism"). As for the sampling procedures themselves (inevitably necessary actions, when dealing with thousands of images), they may take many forms, from choosing one photograph in ten images for a number of x times (where x defines a qualitative 'significance threshold' agreed upon in advance), or extracting consecutive images from separate portions of the respective tumblr, for a similar number of x times.

Finally, 'nostalgia', understood as a sentimental longing or wistful affection for a period in the past, is arguably a universal dimension of human nature (Holbrook & Schindler 1991). It has been explored by historians (Hobsbawm & Ranger 1983; Lowenthal 1985), anthropologists (McCracken 1988), psychologists (Taylor & Konrad 1980; Holbrook & Schindler 1991) and other eclectic authors (Campbell 1987; Davis 1979; Csikszentmihalyi & Rochberg-Halton 1981). This generous pool of knowledge provides ample content for my coding/decoding operationalizations.

The second level of the analysis is based on qualitative semistructured interviews with the blog owners.

These provide empirical narratives that are valuable in complementing the more reflective visual research described above. Depending both on funding and useravailability, they take the form of online or/and offline exchanges (ideally, I prefer to also elicit offline, 'real life' interactions with my subjects, in an effort to create a Geertzian 'thick' description of their modus vivendi). This will be crucial for an indepth understanding of the inspiration, psychodynamics, demographic and cultural peculiarities of the analyzed subjects (as detailed in Hine 2003, or Kozinets 2010). The online interactions can be synchronous (adopting 'chatroom' formats) or nonsynchronous (e.g., email exchanges), and will need to take into account issues of time displacement, anonymity, subjects' personal preference and professional ethics. In this sense, James & Busher's (2009, 13-17) discussion of 'online knowledge construction' includes valuable reflections on practical issues such as cost, accessibility, temporality, quality of data and identity confidentiality. Their book is a useful companion to the online researcher who might find it difficult to plough through these issues using only common sense and liberal amounts of scholarly intuition (as shown, for example, by Teli et al 2007).

Although the diffuse, complex and multifaceted nature of the Internet creates methodological tensions for the interviewing author,

I believe that these challenges are by no means ineluctable. Processes such as online interviews are not fundamentally different, and are in no essential way inferior to conventional exchanges. Indeed, when ideally (but not necessarily) doubled by 'real life' encounters (as argued for, and exemplified in SadeBeck 2004), online interviews benefit from a total anonymity factor and from a lack of formal social tensions (it is hard to avoid, even in informal settings, the 'real life' power dynamics that ensue between the 'scholarly expert' and the rhetorically vulnerable interviewee). Furthermore, they do not suffer from researcherinduced nonverbal (or even verbal) biases and their content is qualitatively enriched by the interviewed subjects' ability to invest her/his replies with more reflectivity (as opposed to a spontaneous, often less complex verbal response) (see also James & Busher 2009).

Beyond these more or less traditionally understood interactions, the Internet also offers alternative forms of (gathering) empirical 'linguistic' data. For example, some of the bloggers I analyzed own personal 'formspring.com' profiles. These pages are hosted by a popular question & answerbased microblogging website (with approximately 22 million registered global users, as of February, 2011), where people interested in their tumblrs have the opportunity of asking a (large) variety of questions. As everything exists in

the public domain, one can archive these pages, and later either use them to review the veridicality of the data elicited via the 'official' interviews, or directly quote and interpret some of this information when discussing the respective case studies at length. Also, there exists the interesting possibility of examining the questions themselves (e.g. possible repeated patterns), in an effort to understand what regular followers understand about, or associate with the tumblrs in question.

This interpenetration of primary sources and their peripherally dispersed availability are, I think, exclusive attributes of contemporary online environments and provide the cultural or media researcher with new opportunities to acquire a multifaceted understanding of their chosen subjects.

Further Exemplifications and Contextual Notes

Before concluding this article, which I hope sheds some light on how to choose, combine and refine methods for the qualitative analysis of online (micro)blogs, some further reflections on Tumblr as a communication platform and on Marie's incredibly popular misswallflower. tumblr.com will prove useful.

Launched in 2007 and already garnering over 3 million users, Tumblr.com is not only an exponentially expanding selfexpression forum, but also probably the most innovative, hybrid, flexible and revo-

lutionary blogging platform currently in existence. The very medium in which these visual and stylistic gestures are born in, the incessant flux of images, videos, quotes and animations, the absence of any subordinating vertical structures (there exists no 'mainstream' vs. 'underground' dynamic here), the possibility of interpreting the blogs both as micro and nicheyouth media (see Thornton 1995, 137151), and the socially interactive element of these fundamentally democratic exchanges, all reflect a parallel world rich in psychosocial meanings still left uncharted by cultural analysts.

As a case in point, it is extraordinary how unitary, in terms of evocative mood and style, Marie's collages of quotations (ranging from Mae West and Woody Allen to Rainer Maria Rilke, E. E. Cummings and Sylvia Plath), videoclips, literary excerpts and photographs are. The blog is the (first, arguably original) instance of what I believe to be an embryonic type of youthful, 'neonostalgic' identity — an idea easily placeable within the previously mentioned broader discourses regarding (re)constructions of social memory, the volatility of aesthetic heritages, and the use of new media/usercentred online spaces in creating these identities.

Marie simultaneously constructs (all photos are actively 'hunted' by her on the Web) and expresses (she obviously filters the content according to sophisticated personal

preferences) her identity by 'transformatively' combining mainstream symbols (e.g., a mini-fixation on Chanel, the use of images and references from popular magazines such as Elle, Vogue etc.) with a subtly articulated elitism, presenting, for example, Ladurée luxury cakes and pastries, and literary and musical connections extracted from 'high culture'. Furthermore, her finely tuned, wistful sense for mood, emotion and affective imagery (in other words, her Barthian sensibility for visual 'punctums'), is well worth analysing. Equally, her indefinable, yet subtly patterned, silky taste for what can only be described as 'love', 'sadness' and 'ethereality', or her highly distilled, existentialist longing for beauty, are all absorbing dimensions. So is her articulation of femininity, and the apparent longing for a space of eternal, retro 'youth'. These are all possible semiotic patterns, similarly articulated by voixdouce.tumblr.com, feelslikedejavu.tumblr.com, and others, that should be further explored. How, for example, do they relate to more popular forms of mediatized youth culture? Without explicitly rejecting or criticising it, these spaces (may) nonetheless propose a complementary, highly personalized space in which youth identities can be reflected or shaped.

Conclusions

Despite the fact that these described realities are not contextually located in an immediately familiar physical environment, they are interactively constructed, are open to the public, and make use (albeit in new or innovative ways) of universally expressive tools such as texts, sounds and images. From a methodological viewpoint, therefore, it is important to consider both this 'universal' dimension of the analyzed material (implicitly, its potential to be interpreted via traditionally acknowledged academic methods such as the ones I previously discussed), and also the need to match its in-situ hybridism with an equally hybrid methodology. As the tumblrs include images, texts, clips, but also an author (or, rather, a bricoleur) who uses these semiological tools expressively, it is necessary to examine both the projected meanings (in this case, 'nostalgia', and the visual construction of 'pastness') and the meaningmakers themselves. Discourse analysis and semiologically grounded hermeneutics may cater for the former, while interviews address the latter. The purpose, however, remains straightforward and unified: to understand what motivates young people such as Marie to do what they do, to analyze the result of their efforts, and to place these in a culturaltheoretical context. The fact that one can do this with a personal computer with online access not only confirms the fact that the Internet is a powerful platform that has significantly changed the way people communicate and

connect with each other (James & Busher 2009, 5); it also strengthens the claim that the World Wide Web is a multidimensional space where individuals pursue a multitude of forms of cultural and personal actualization. Indeed, only by using a similarly multidimensional methodological approach in the study of such a medium, can we begin to pertinently describe, understand or reflectively engage with it.

Finally, it is worth underlining that there is still much need for further sociological research that documents and explores the blogosphere's ongoing transformation or shift from the textual to the visual, from linear archives to fragmentary realtime communications, from insular, daily-life journals to the creation of 'ambient awareness' and a dispersion of culturalvisual 'exhibitionism/voyeurism' (Kaplan & Haenlein 2011, 105). We also need to understand and acknowledge that: 1. blogs have become extremely popular (if not ubiquitous), as well as increasingly polysemic, hybridized (textual/visual/synesthetic), interconnected and interactive; and 2, that old established paradigms such as that associated with 'youth subcultures' are, at best, insufficient when dealing with Internet (youth) culture. Studies of such environments will need to combine an attention to the technical aspects of blogging (e.g., use of templates, plug-ins, social media extensions etc) with clear, individualised and comprehensive analyses of both personal and (digitally) cultural variables (who the blogger is, what blogging platform she or he is using, how isolated or popular the respective blog is, what discourse is articulated, and by what means, and can this discourse be extrapolated or placed in a larger blogging trend, etc). My study is therefore only one example, in one particular context, of a much larger, virtually boundless phenomenon.

References

Andes, L. 1998. Growing Up Punk: Meaning and Commitment Careers in a Contemporary Youth Subculture. In J.S. Epstein (Ed.), *Youth Culture: Identity in a Postmodern World*. Oxford: Blackwell.

Barthes, R. 1975. *The Pleasure of the Text*. New York: Hill & Young.

Barthes, R. 1982. *Camera Lucida: Reflections on Photography*. Translated by R. Howard. London: Jonathan Cape.

Baudrillard, J. 1981. History: A Retro Scenario. In *Simulacra and Simulation.* Translated by S. F. Glaser, pp. 4348. Michigan: Ann Arbour Press. [See also J. Baudrillard. 1983. *Simulations*. New York: Semiotext.]

Badger, M. 2004. Visual Blogs. In L. J. Gurak, et al (Eds.), *Into the Blogosphere: Rhetoric, Community and Culture of Weblogs.* Retrieved May 25, 2011 from blog.libn.umn.edu/blogosphere/visual_blogs.html

Beck, C. 2005. Benefits of Participating in Internet Interviews: Women Helping Women. In *Qualitative Health Research*, 15 (3): 411422.

Bennett, A. 2004. Virtual Subculture? Youth, Identity and the Internet. In A. Bennett & K. KahnHarris (Eds.), *After Subculture: Critical Studies in Contemporary Youth Culture*. New York: Palgrave Macmillan.

Best, S. J., B. Krueger, C. Hubbard & A. Smith. 2001. An Assessment of the Generalizability of Internet Surveys. In *Social Science Computer Review*, 19 (2): 131145.

BlogPulse 2011. *Blogpulse*, by Nielsen. Retrieved May 2011 from www. blogpulse.com.

Brooks, K., C. Nichols, & S. Priebe. 2004. Using the Online Medium for Discursive Research about People with Disabilities. In *Social Science Computer Review*, 22 (2): 228241.

Campbell, C. 1987. *The Romantic Ethic and the Spirit of Modern Consumerism*. New York: Blackwell.

Coomber, R. 1997. Using the Internet for Survey Research. In *Sociological Research Online*, 2 (2). Retrieved May 2011 from socresonline.org.uk/socresonline/ 2 /2 /2.html.

Csikszentmihalyi, M., & E. R. Halton. 1981. *The Meaning of Things: Domestic Symbols and the Self.* Cambridge: Cambridge University Press.

Davis, F. 1979. *Yearning for Yesterday: A Sociology of Nostalgia*. New York: Free Press.

Darley, A. 2001. *Visual Digital Culture*. London: Routledge.

Festa, P. 2003. *Blogging Comes to Harvard*. Cnet Report. Retrieved May 2011 from news.com/2008-10-82-985714.html

Foucault, M. 1979. 'What is an author?' In J. Hanari (Ed.), *Textual Strategies: Perspectives in PostStructuralist Criticism*: 141-160. Ithaca, NY: Cornell University Press.

Foucault, M. 2002. *Archaeology of Knowledge*. London: Routledge
.
Franklin, K., & C. Lowry. 2001. Computer Mediated Focus Group Sessions: Naturalistic Inquiry in a Networked Environment. In *Qualitative Research*, 1 (2): 169-184.

Gill, R. 1996. 'Discourse analysis: practical implementation'. In J. Richardson (Ed.), *Handbook for Qualitative Methods for Psychology and the Social Sciences*: 141-156. Leicester: British Psychological Society.

Gomm, R., M. Hammersley, & P. Foster. 2000. *Case Study Method*. London: Sage.

Haenfler, R. 2006. *Straight Edge: Clean-Living Youth, Hardcore Punk, and Social Change*. Rutgers University Press.

Hebdige, D. 1979. *Subculture: the*

Meaning of Style. London: Methuen.

Helton, J., &. W. Staudenmeier. 2002. Re-imagining Being 'Straight' in Straight Edge. In *Contemporary Drug Problems*, 29: 445–473.

Hessler, R., L. Downing, C. Belz, A. Pelliccio, M. Powell, & M. Vale. 2003. Qualitative Research on Adolescent Risk Using EMail: A Methodological Assessment. In *Qualitative Sociology,* 26 (1): 111-124.

Hewson, C. 2003. Conducting Research on the Internet. In *Psychologist*, 16 (6): 290-293.

Hewson, C., P. Yule, D. Laurent, & C. Vogel. 2003. I*nternet Research Methods*. London: Sage.

Hine, C. 2003. *Virtual Ethnography*. London: Sage.

Hine, C. 2005. *Virtual Methods*. Oxford: Berg.

Hobsbawm, E., & T. Ranger (Eds.) 1983. *The Invention of Tradition*. Cambridge: Cambridge University Press.

Hodkinson, P. 2002. *Goth: Identity, Style, and Subculture.* Oxford: Berg.

Holbrook, R., & M. Schindler. 1991. 'Echoes of the Dear Departed Past: Some Work in Progress on Nostalgia', In *Advances in Consumer Research*, Solomon: Provo.

Hookway, N. 2008. Entering the Blogo-sphere. Some Strategies for Using Blogs in Social Research. *In Qualitative Research*, 8 (1).

James, N., & H. Busher. 2009. *Online Interviewing*. London: Sage.

Jameson, F. 1985. Postmodernism and consumer culture. In F. Foster (Ed.), *Postmodern Culture*. London: Pluto Press.

Jameson, F. 1991. *Postmodernism, or the Cultural Logic of Late Capitalism*. London: Verso.

Jones, S. (Ed.). 1999. *Doing Internet Research: Critical Issues and Methods for Examining the Net*. London: Sage.

Kahn, R., & D. Kellner. 2004. New Media and Internet Activism. From the "Battle of Seattle" to Blogging. In *New Media and Society*, 6 (1): 87-95.

Kerbel, M., & J. Bloom. 2005. Blog for America and Civic Involvement. *Harvard International Journal of Press and Politics*, 10 (4): 327.

Kozinets, R. V. 2010. *Netnography. Doing Ethnographic Research Online*. London: Sage.

Krippendorf, K. 1980. *Content Analysis: An Introduction to Its Methodologies*. London: Sage.

Lowenthal, D. 1985. *The Past Is a Foreign Country*. Cambridge: Cambridge University Press.

Lull, J. 1987. Thrashing in the Pit: an Ethnography of San Francisco Punk Subculture. In R. Lindlof (Ed.), *Natural Audiences: Qualitative Research of Media Uses and Effects*. Norwood, NJ: Ablex.

Lutz, C., & J. Colins. 1993. *Reading National Geographic*. University of Chicago Press.

MacDougall, R. 2005. Identity, Electronic Ethos and Blogs. A Technological Analysis of Symbolic Exchange on the New News Medium. In *American Behavioral Scientist,* 49 (4): 575-599.

McCracken, G. 1988. *Culture and Consumption: New Approaches to the Symbolic Character of Consumer Goods and Activities.* Indiana University Press.

McGuigan, J. (Ed.). 1997. *Cultural Methodologies*. London: Sage.

McRobbie, A. 1993. Shut Up and Dance: Youth Culture and Changing Modes of Femininity. In *Cultural Studies*, 7: 406426.

McRobbie, A. (Ed.). 1989. *Zoot Suits and Second-hand Dresses: An Anthology of Fashion and Music.* Basingstoke: Macmillan.

Miles, S. 2000. *Youth Lifestyles in a Changing World*. Buckingham: Open University Press.

Mitra, A., & E. Cohen. 1999. Analyzing the Web. In S. Jones (Ed.), *Doing Internet Research. Critical Issues and Methods for Examining the Net*: 179-202. London: Sage.

Muggleton, D. 2000. *Inside Subculture: The Postmodern Meaning of Style*. Oxford: Berg.

Park, R., & E. Burgess (Eds.). *1925. The City. An Investigation of Human Behaviour in the Urban Environment*. University of Chicago Press

Phillips, N., & C. Hardy. 2002. *Discourse Analysis: Investigating Processes of Social Construction*. London: Sage.

Pileggi, M. S. 1998. *No Sex, No Drugs, Just Hardcore Rock: Using Bourdieu to Understand Straight-Edge Kids and Their Practices*. Temple University Press.

Potter, J. 1996. Discourse analysis and constructionist approaches: theoretical background. In J. Richardson (Ed.), *Handbook for Qualitative Methods for Psychology and the Social Sciences:* 125-140. Leicester: British Psychological Society.

Rice, R., & F. Williams. 1984. *The New Media*. Beverly Hills: Sage.

Rogoff, I. 1998. Studying visual culture. In N. Mirzoeff (Ed.), *The Visual Culture Reader*: 14-26. London: Routledge.

Rose, G. 2007. *Visual Methodologies: An Introduction to the Interpretation of Visual Materials* (2nd Ed). Thousand Oaks: Sage.

Sabin, R. 1999. *Punk Rock: So What?* London: Routledge.

Sade, G. 2005. Weblogs as Open Constructive Learning Environments. *Blogtalk Downunder.* Retrieved May 2011 from blogherald.com/2005/10/10/the-blog-herald-blog-count-october-2005.

SadeBeck, L. 2004. Internet Ethnography: Online and Offline. In *International Journal of Qualitative Methods*, 3 (2).

Sardiello, R. 1998. Identity and Status Stratification in the Deadhead Subculture. In J. S. Epstein (Ed.), *Youth Culture: Identity in a Postmodern World.* Oxford: Blackwell.

Scammel, A. 2006. Business Writing for Strategic Communications: The Marketing and Communication Mix. In *Business Information Review,* 23 (1): 4349.

Scheid, L., & E. Wright 2004. Common Visual Design Elements of Weblogs. In L/ J. Gurak et al (Eds), *Into the Blogosphere: Rhetoric, Community and Culture of Weblogs.* Retrieved May 25, 2011 from blog.libn.umn.edu /blogosphere/ commonvisual.html

Schreier, M. 2011. *Qualitative Content Analysis.* London: Sage.

Silver, D. 2000. Looking Backwards, Looking Forward: Cybercultre Studies 19902000. In D. Gauntlett (Ed.), WebStudies: Rewiring Media Studies for the Digital Age. Oxford University Press.

Solomon, D. 2001. Conducting Web-Based Surveys. In *Practical Assessment, Research and Evaluation*, 7 (19). Retrieved May 2011 from pareonline.net/getvn asp?v=7&n=19.

Stake, R. E. 1995. *The Art of Case Study Research*. Thousand Oaks: Sage.

Taylor, S. M. & V. A. Konrad. 1980. Scaling Dispositions toward the Past. In *Environment and Behavior*, September: 283-307.

Teli, M., P. Francesco, & D. Hakken. 2007. The Internet as a Library-Of-People: For a Cyberethnography of Online Groups. In *Qualitative Social Research*, 8 (3).

Thornton, S. 1990. Youth Culture Review. In *Popular Music*, 9 (2): 253-255.

Thornton, S. 1995. *Club Cultures. Music, Media and Subcultural Capital*. Cambridge: Polity Press.

Thrasher, F. 1927. *The Gang: A Study of 1,316 Gangs in Chicago*. University of Chicago Press.

Wall, M. 2005. Blogs of War. Weblogs as News Journalism. In *Journalism*, 6 (2): 153-172.

West, N. 2000. *Kodak and the Lens of Nostalgia*. University of Virginia Press.

Williams, J. P. 2003. The Straightedge Subculture on the Internet: A Case Study of Style-Display Online. In

Media International Australia In-corporating Culture and Policy, 107: 61– 74.

Yin, R. K. 2003. *Case Study Research: Design and Methods* (3rd Ed.). Thousand Oaks: Sage.

Infrastructural Strangeness in Virtual Spaces

Andrea Jonahs

A project on interracial dating online provides the backdrop for a survey on the conceptual frameworks available for research in the folds of race and virtual spaces. This essay discusses some of the methodological challenges that might be encountered, and relies on past work as guideposts for negotiating the tricky nature of virtual environments. The difficulty of examining website infrastructure, particularly the technologies used by dating websites to sort, profile, store, and filter, is the central problem. Using Susan Leigh Star's (1999) notion of infrastructure—the invisible, embedded, systems that orchestrate the background—I suggest the infrastructure of dating websites can allow users to discriminate in ways that are not possible in real life. I propose that research situated at the intersection of race and virtual spaces would benefit by looking more closely at the built environments that scaffold social relationships and practices.

Keywords: race, internet, infrastructure, categorization, dating websites, interracial relationships.

The internet is a revealing platform to examine the contours of interracial dating. Today many singles in North America live in increasingly multiethnic and cosmopolitan environments where lingering stigma around mixed unions are fading (Pasel et al. 2009; Milan et al. 2010) Examining this gradual social shift through the lens of interracial dating online can provide insight on current race relations, and reveal a trajectory from racial tolerance to racial embracement (Yancey 2002).

Interracial relationships have increased largely due to the more accepting attitudes of young people; given that the same demographic is the most active online, it is fair to assume that their liberated outlook is carried to their online dating practices (Passel et al. 2009; Madden and Lenhart 2006).1 While there is much to be celebrated, there is also room to examine how persistent racial prejudices are reinscribed in new platforms and in new epochs. An illustration of how racial prejudices, interracial dating, and virtual spaces intersect can be found in a 2009 blog post released by the popular dating website OkCupid.2 This provocative report titled "How Your Race Affects the Messages You Get", tallied the reply rates from one million of the site's seven million active users, and revealed troubling patterns of racial exclusion. The most controversial claims in the report suggested that black

women received disproportionally less responses from all races of men, while white men were disproportionally preferred by women of almost all races (Rudder 2009). As expected, the report moved through the blogosphere lauded, contested and heavily debated; to date, at over 1500 comments, it is the site's most discussed post. Amid the brouhaha, I wondered if dating websites allowed users to date *differently*? Specifically, does the infrastructure of dating websites serve to augment, preserve, or mitigate real-life barriers to interracial, interethnic and intercultural relationships? By providing singles with the features to sort, profile, and filter, are users able to discriminate in ways that are not possible in real life? Could the infrastructure be returning users to regressive dating pools and practices?

While discussing these very questions with my professor, he quickly challenged my preoccupation with the structural aspects of the websites. He interrupted my effusive, "but the websites do X, and the websites do Y…" and sketched out a simple Venn diagram where the sphere of user practice imbricated the sphere of website infrastructure: the answer to my questions resided in the overlap. Indeed, Star and Bowker (2007, 277) who have written extensively about structure, point out that "the choice does not lie between formal architecture and lived experience—the

unit of analysis is in their intersection". Yet, I couldn't deny that I was especially troubled by the websites themselves—the ways in which users were encouraged to interact with the interface, the mystery of what took place *behind* the screen. This inability to orient oneself within structure can be thought of as 'infrastructural strangeness'; "infrastructural strangeness is an embedded strangeness…that of the forgotten, the background, the frozen in place" (Lampland & Star 2009, 18). Behind a visually pleasant interface hides a technically sophisticated system of databases, algorithms, categorization, and code that ultimately processes and delivers users' desires. Using my project on interracial dating websites as a backdrop, this essay discusses some of the analytical approaches available to research in the folds of race and virtual space, with particular attention given to the unique challenge of infrastructure.

Background

Early attitudes on the internet remind me of a line from a 1963 poem by Bob Dylan: *You need a Greyhound bus that don't bar no race, that won't laugh at your looks, your voice or your face* (Dylan). He uses the analogy of a Greyhound bus to suggest that discrimination is integrated into the routine systems of our everyday lives. The transportation platform Dylan alludes to parallels the virtual platform of the internet which, to this day, echoes similar

utopian ideals. At first glance, the internet could "bar no race" given that its unrestricted network consisted of seemingly "invisible" users (Turkle 1996; Nakamura 2002). Research on the digital divide represented the first substantive challenge to these assumptions. Numerous studies examined the political, social, and economic reasons that some groups—many of which were people of colour—encountered barriers to access and participation on the internet (Hoffman & Novak 1998; Nakamura 2002). Nakamura underscores that "people of color were functionally absent from the internet at precisely the time when its discourse was acquiring its distinctive contours" (2002, xii). While concerns of access and participation have quieted with increased worldwide adoption of the internet, there are still critical voices emerging. For example, Dalhberg (2007) challenges the rhetoric of "universal access". Presumably, it could "end up supporting the dominant discourse—attracting people into spaces of liberal capitalist practice while obscuring this structuring of online space, the associated asymmetries of power and the lack of any significant institutional change" (Dalhberg 2007, 838). Both Nakamura and Silver (2006) challenge internet researchers to consider the subtle ways in which virtual environments function as communicative technologies that shape social relationships and attitudes about race.

In the introduction to David Silver's (2006) anthology *Critical Cyberculture Studies*, he calls for the re-centering of marginalized voices by insisting the field approach "cultural difference— human elements of race and ethnicity, gender, sexuality, age, and disability—not as an afterthought or a note inserted under 'future studies' but, rather, front and center, informing our research questions, frameworks, and findings" (2006, 8). Given the nature of my project, I find Silver's petition relevant. However, his emphasis on the "human element" overlooks the perplexing work of *non* human agents, the invisible machinery ordering a seemingly nebulous space.

Science and technology scholars have contributed much along the continuum of social practice and the built environment. Bruno Latour (1996) for example, argues that purely technical things can influence behaviour, morality, and even discriminate in ways that go unnoticed; seat belts and doorstops illustrate this phenomenon. Winner (1985, 26) posits that the material, physical, and structural components of technology "embody specific kinds of power and authority"; in this sense, technology is not neutral; it is a *political* artefact, an "exercise of power and experience of citizenship". Winner was referring to the bridges in Long Island, New York, constructed during the 1920's up until the 1970's. He was

of the opinion that the bridges were wilfully designed low-hanging to "limit access of racial minorities and low-income groups" from the public parks and beaches (1985, 28). While the creditability of Winner's provocative case has been a source of much dispute (see Cooper & Woolgar 1999; Joerges1999) there is an important question that emerges. Asking who are *not* served by a particular built environment is one method researchers can use to begin uncovering what seeks to be hidden (Lampland & Star 2009, 17). Applying this question to dating websites, it strikes me that those philosophically open to interracial relationships, and an overall more meritocratic approach to dating, might find the technical systems used to ensure matching and compatibility—categories, clickable boxes for race, defaulting settings, and so on—working to discriminate.

Methodological Challenges in Virtual Space

The village matchmaker and newspaper personals have paved the way for the newest rendition of mediated matching: dating websites. Since they exist online, the characteristics of virtual spaces become an indelible part of this old, yet still awkward, dance. Whether it be hyperlinks or the cacophony of co-produced medias; the jerky tension between the ephemeral and profoundly permanent; or the mixed blessing of audience participation;

the internet and its various capillaries, present researchers with a number of distinct challenges.

Studies on race and the internet frequently turn to discussion boards as a source of available "unfiltered" discourse. Peter Chow-White's (2006) project looks at 1363 discussion board postings on sex tourism websites to identify the larger conversations around race, gender, sexuality, and economics. He comments on the complexity of parsing this kind of amassed data:

From a micro point of view, they are part of a particular discussion string and, at the macro level, each contributes to an evolving discursive formation about sex tourism. The overall narratives that structure sex tourism stories are evolving in the sense that the mechanism of user feedback constantly pushes the discursive possibilities and actual boundaries of the board in terms of its size. The readers are also writers. None of the posts is a self-contained unit (Chow-White 2006, 888).

Chow-White compares this virtual space to Foucault's position on the intertexuality of books "beyond the title, the first lines, and the last full stop, beyond its eternal configuration and its autonomous form, it is caught up in a system of references to other books, other texts, other sentences: it is a node within a network" (as quoted in Chow-White, ibid). The difficulty resides in

containing a specific site of analysis in an environment that is always kinetic and always morphing.

Another tricky aspect of virtual spaces is evident when traditional media and new media converge. André Brock (2009) points to such tensions in his paper "Life on the Wire: Deconstructing race on the internet". The Wire, an acclaimed HBO series that fictionalized realistic narratives of Baltimore city urban life, is the topic of discussion on Freakonomics, a popular blog on the *New York Times* news website. Brock highlights the layers that inevitably spill into each other:

> This article looks at four elements: the New York Times website, which through a combination of professional ethos and code, fostered a venue for civil public discussion about race. The television show The Wire serves as a topical focus for the third element, the blog Freakonomics. In the blog, race was articulated by the fourth element – the commenters and the blogger – in terms mediated by the show as well as by the forum in which the discussions were presented. The four elements: environment, culture, internet, and audience combined to present an internet experience that opened up understandings of American race relations (2009, 345).

For this media tier, Brock proposes Critical Technoculture Discourse Analysis (CTDA) as an interpretative method for examining internet phenomena within a sociocultural media matrix (2009, 345). Why do traditional examinations of talk, text, and technology not suffice? Hales et al. argue that "a solely discursive analysis or solely technological analysis would, by necessity, obscure important interactions between discourse and technology" (Hales et al. 2009, 1046). CTDA, then, attempts to address the manifold media types that permeate virtual spaces, as well as the rich discourses they stimulate.

Methods such as critical discourse analysis (CDA), despite the limitations suggested above, are frequently used by researchers looking at race and the internet. Dating websites produce a variety of talk and texts; advertising copy, personal advertisements, discussion boards, design, images, graphics, user photos and such. For example, the pictures of blissful (white) couples or attractive (white) women that greet users on the homepages of all the most popular websites, reflect normative assumptions about what constitutes compatibility and desirability in couples. Furthermore, CDA considers the sensorial experience of media, creating a valuable opportunity to study users' interactions with new communication technologies:

> As a medium for the social construction of meaning, discourse is never solely linguistic. It op-

erates conjointly with vocal and visual elements (depiction, gesture, graphics, typography), in the context of meaning-laden architectures, with the semiotics of action itself, and with music or other extra-linguistic auditory signs. Its form is constrained by the media through which it moves (Fairclough et al. 2004, 5).

While Fairclough describes a rich site for analysis, the quote sidesteps the complexity of trying to see these "meaning-laden architectures" or the framework constraining the discourse. Indeed, the best structural systems disappear as it is "designed to become invisible as it is stabilized" (Lampland & Star 2009, 207; Bowker & Star 1999). Herein lays the challenge in wanting to understand the black box of dating websites.

Infrastructural Strangeness

"Technology proposes itself as the architect of our intimacies" (Turkle 2011, 1). This terse assessment on the material that brings texture to our modern relationships is a useful prologue to the question of whether dating websites allow us to date *better*. The ways in which dating sites both constrain and enable certain kinds of unions is partly related to the nature of the material and its arrangement. Approaching structural elements that are not readily visible (or knowable) can leave researchers feeling ill-equipped. Infrastructural

inversion provides a conceptual tool for exposing hidden work. By turning infrastructure inside out, one can foreground the truly backstage elements of work and practice (Star 1999, 380; Bowker & Star 1999, 34). Star (1999) provides a number of "tricks"—essentially, defining characteristics of infrastructure— that help with infrastructural inversion. For simplicity, I have focused on a few of the characteristics that are especially relevant to my project:

1) Infrastructure is embedded in other structures, social arrangements, and technologies.
2) Infrastructure requires a great deal taken-for-grantedness or naturalized familiarity with the processes and conventions in order for it to be successful.
3) Infrastructure becomes visible upon breakdown.

Certainly, dating websites are comfortably ensconced in larger social arrangements and technologies. For instance, sociological research suggests that potential partners are *first* screened on similarity of physical characteristics, and *secondly* on psychology and/or culture similarities (McIntosh et al. 2007). When people do cross romantic racial boundaries, they typically feel that the social distance between groups is small and that the propinquity is great (Yancey 2007; Park 1924).3 These practices are unlikely to be disturbed when dating habits move to a virtual platform.

Embeddedness cushions standards which at one time may have been questioned, but eventually come to feel natural, comfortable, and operate, for the most part, unnoticed and unchallenged. Banking, shopping, watching movies, checking email, catching up on news, talking to friends, and yes, even dating, can feel like a one continuous motion when online. An otherwise consequential "click" to eliminate a specific racial group on a dating website might be framed along with other more efficient, time-saving actions that take place online. The longstanding practice of ticking boxes for race on paper, and later electronic forms, have now become engrained into the woodwork of dating websites.

In a book about young people and the digital world, Craig Watkins (2009) writes that "race is a kind of 'inconvenient truth' for evangelists of the social web" (76). He is referring to a utopian imagination that sees the internet as an extension of the American Dream, imbued with ideals of democracy, pluralism, diversity, and emancipation from identities stamped to the body (Dyson 1994; Nakamura 2002; Turkle 1995). Recent scholarship that looks at online dating practices, however, draws attention to the breakdown of these ideals. Feliciano and Robnett (2011) and Yancey's (2007) work in the field of sociology reveals patterns of racial exclusion in online dating, buttressing OkCupid's claim

that race does in fact play a role in online dating choices. A deeper understanding of infrastructure includes considering those that are not served by a particular way of ordering, such as the marginalized groups that exist on dating websites (Star 1999; Lampland & Star 2009).

Categories—indeed, a salient feature of dating websites—can exert power, torque, and fail on a mass scale. Bowker and Star's concept of "torque" is worthy of pause; it refers to a kind of biographical mangling that occurs when classification systems go awry, when people can't be easily categorized, or when systems enforce categories that conflict with ones biography (2000, 225). The authors use the case of apartheid to illustrate how racial categories can weld lives, especially as they relate to personal and intimate relationships.

Apartheid serves as an extreme example of what can happen when rigid categories are evoked. Under apartheid, sex between racial groups was criminalized to the extent that police were diligently involved in the imitate affairs of people; "more than 11, 500 people were convicted of interracial sex; anything from a kiss on up" (Bowker & Star 1999, 198). Putting aside obvious differences in the scale of consequence, apartheid's heartbreaking example allows us to seriously consider the problematic ways in which dating websites use categories:

Not all systems attempt to clas-

sify people as globally, or as consequentially, as did apartheid; yet many systems classify users by age, location, or expertise. Many are used to build up subtle (and not-so-subtle) profiles of individuals based on their filiations to a myriad of categories. In the process of making people and categories converge, there can be tremendous torque of individual biographies…For these people the infrastructures that together support and construct their identities operate particularly smoothly (though never fully so). (Bowker and Star 2002, 225)

Expanding on the idea that good structures are mostly invisible, Peter Chow-White's (2009) research on the HapMap project demonstrates how conduits of information on race are subtlety concealed. The HapMap project focuses on the ways in which humans are genetically different, while its parent, the Human Genome Project, looks at how we are 99.9% the same. While both international projects use the human genome and similar technical information systems, their goals and subsequent racial frames are vastly different. Chow-White contends that where race was once seen as biological, and more recently as cultural, it has now been transformed into information bits: the "informationalization of race" (221).

These informational infrastructures, made up of databases, the internet, and code, play a constitutive role in social, political, cultural, and scientific processes…the myriad of decisions that go into creating information technologies and the attitudes and values that are written into code become hidden behind the frontend interfaces. (222)

There are moral implications to how information travels, on which pathways, to what destination, and to what social effect.

Mobilizing race as information seems to be one of the ways in which dating websites can sidestep the messiness of racial categories. In our current environment where careful, non-racial, colourblind language inflects the way we talk about race, racial difference is often constructed as cultural differences (Bonilla-Silva 2006). Rendering race as information is not only a design feature of the dating websites, it may also serve to frame users perceptions of the choices they make. For example, Match.com places height, body type, eye colour, and hair colour under the "Appearance" rubric. The choices of race/ethnicity are found under "Background / Values" (faith, language and education are also included there). The decision to place race/ethnicity in a more cultural category, rather than the appearance category is consistent with our current racial discourse (Bonilla-Silva 2006). Situating race/ethnicity within Background/Values

allows users who want to exclude certain races, to do so without feeling like they are making a decision based on racial phenotype. Instead, race is situated along side "faith", as almost a lifestyle choice. In this way, "information" based on race is softened, neutralized, and made nearly invisible by way of infrastructure.

A Practical Model

Acknowledging the sway of infrastructure doesn't necessarily require a complete overturning of a complex organizing system. Jenny Davis' (2010) work provides a simple model that considers the role of both practice and structure. Her paper, "Architecture of the personal interactive homepage: constructing the self through MySpace" looks at how the physical structure of MySpace homepages influences self presentation and online identity formation (Davis 2010, 1108). She acknowledges that like the real world, "physical structuring (or architectures) of [online] space has a very real impact upon the ways in which action and interaction are organized within it" (Davis 2010, 1104). Along with traditional ethnographic methods such as interviews, she also chooses to build her personal MySpace page from scratch.

This straightforward approach allows her to pay close attention to the taken-for-granted actions that become an entrenched part of the built environment's many layers. In an interview, Susan Star comments that despite the habitual ways in which technology is utilized, there is real absence of research on its everyday practice. She suggests researchers most often tackle the big questions—for example, the pervasiveness of social networking sites—without paying attention to the routine uses of technology (Zachry 2008, 446). By building a MySpace page from the bottom up, Davis as user and researcher is able to shed some light on these overlooked customs.

Davis' research shows that MySpace users share different types of information, with different intentions and different levels of awareness. While this claim is modest, she is still able to draw conclusions about the role of structure: "The point is that the architecture of MySpace, by providing templated biographical categories, a *top friends* section, and the open-ended *about me* section, provides a format for actors to overtly disclose who they are" (Davis 2010, 1111). Later on, she says, "the point is not that all users do contextualize their presentation, but that the architecture of MySpace gives actors the opportunity to contextualize their presentations (Davis 2010, 1113). Admittedly, I was first underwhelmed with Davis' conclusion; this is obvious, I thought. However, my reaction was a direct result of infrastructure's lull, a complete taken-for-grantedness that allows it to be overlooked as the central artefact for study.

The presence of clickable boxes and input fields on dating sites are used to describe potential partners in terms of skin colour, eye colour, hair colour, geography, personality and many other physical and social characteristics. Similarly to Davis, I surmise that research will reveal the somewhat boring conclusion that users chose to date someone (of filter a certain type of individual out) based on a variety of factors. While this is not terribly novel, the role of structure in facilitating a more profound way of profiling, sorting, and filtering, might be. For example, sites such as Match.com, eHarmony.com, and Chemistry.com all require postal codes to move past the homepage and begin actually browsing profiles. The postcode field operates as "key" to go through the next door, to open the next page. If a user chooses not to enter their postal code, perhaps, as way of subverting their fixed location, the website will read the IP address and present users with matches closest to them geographically. This kind of default setting can impose filters on those who may actually be making the choice not to exclude. Furthermore, postal codes don't always correspond with racially or ethnically diverse neighborhoods.

Conclusion

Nakamura (2006, 30) asserts that much of what is available to students doing work in the crosshairs of race and cyberculture is inadequate in its most fundamental purpose—helping students "analyze actual interfaces and new media objects". Teachers and scholars too are at a loss "if they are trying to teach theory, cultural difference, and cyberculture studies together" (ibid.) Similarly, there are insufficient resources for studies pertaining to what occurs *beyond* the interface. Because structures categorize, sort, name, torque, and enforce standards on such a large scale, but also disappear like white paint on walls, it is easy ignore the role they play in off and online movements. Likewise, this invisible work ends up being neglected in our critical scholarship as well. While Star and her colleagues have provided a solid grounding for social scientists to approach the work of structure, many questions remain. Given how these systems of information and code organize the picayune to the global, escaping classification altogether is impossible. Is classification always exclusionary and problematic? Are there *better*, more democratic ways to classify? Can systems be made stable without sacrificing transparency? The language of algorithms, databases, and computer code can be disorienting and baffling for the lay researcher so then, *how far is too far*, or whether one has looked far enough remain important considerations. The goal of the social scientist must be to keep the highly technical aspects tethered to their real world applications and effects.

As it stands, the tools we have to analyze virtual space and their invisible structures are still in the coals, ready to be employed in burgeoning research on race and the internet.

Endnotes

[1] Madden and Lenhart found that the largest percentage of online daters was among 18-29 year olds. Passel et al. found that those 25 and younger were the most likely to marry out. This percentage declines as an increase in age.

[2] This post was released on OkCupid's sister site OkTrends, described as providing "original research and insights from OkCupid. We've compiled our observations and statistics from hundreds of millions of OkCupid user interactions, all to explore the data side of the online dating world." Both sites are run by four men with math degrees from Harvard University.

[3] Social distance does not speak to spacial distance. Rather, it gauges the attitudes, feelings, and constructions toward the Other. Who do we sympathize with and to what extent? Who do we frame in terms of different/same, us/them, or insiders/outsiders?

Resources

Bonilla-Silva, E. 2006. *Racism without racists: Color-blind racism and the persistence of racial inequality in the United States.* Lanham: Rowman & Littlefield Publishers.

Brock, A. 2009. Life on the Wire. *Information, Communication & Society* 12 (3): 344-363.

Chow-White, P. A. 2006. Race, gender and sex on the net: Semantic networks of selling and storytelling sex tourism. *Media, Culture & Society* 28 (6): 883-905.

Chow-White, P. A. 2009. Data, code, and discourses of difference in genomics. *Communication Theory*, 19(3): 219-247.

Cooper, G., and S. Woolgar. 1999. Do artefacts have ambivalence: Moses' bridges, winner's bridges and other urban legends in S&TS. *Social Studies of Science*, 29(3): 433-449.

Dahlberg, L. 2007. Rethinking the fragmentation of the cyberpublic: From consensus to contestation. *New Media & Society* 9 (5): 827-847.

Davis, J. 2010. Architecture of the personal interactive homepage: Constructing the self through MySpace. *New Media & Society* 12 (7): 1103-1119.

Dylan, B. 1963. "Last thoughts on Woodie Guthrie" (spoken word). Bob Dylan website. http://www.bobdylan.com/songs/last-thoughts-woody-guthrie accessed 20 July 2011.

Dyson, E. 1996. Cyberspace and the American dream: A Magna Carta for the knowledge age (release 1.2, august 22, 1994). *The Information Society* 12 (3): 295-308.

Fairclough, N., P. Graham, J. Lemke, and R. Wodak. 2004. Introduction. *Critical Discourse Studies* 1 (1): 1-7

Feliciano, C., and B. Robnett. 2011. Patterns of racial-ethnic exclusion by internet daters. *Social Forces*, 89(3): 807-828

Foucault, M. 1972. *The Archaeology of Knowledge*, trans. A.M. Sheridan. New York: Harper and Row

Hales, K., L. Kvansy, and A. Brock 2010. Cultural Appropriation of Technical Capital. *Information, Communication & Society* 13 (7):1040-1059.

Hoffman, D.L., and T.P. Novak. 1998. Bridging the racial divide on the internet. *SCIENCE* 280 (5362): 390-391.

Joerges, B. 1999. Do Politics Have Artefacts? *Social Studies of Science*, 29 (3): 411-431.

Lampland, M. and S. L. Star. 2009. Standards and their stories: How quantifying, classifying, and formalizing practices shape everyday life. Ithaca: Cornell University Press

Latour, B. 1992. Where are the Missing Masses? The Sociology of a Few Mundane Artifacts, in *Shaping Technology/Building Society: Studies in Sociotechnical Change*, eds. Bijker & Law. Cambridge, Mass: MIT Press.

Madden, M., and A. Lenhart. 2006. Online Dating. *Pew Internet & American Life Project*. http://www.pewinternet.org/~/media//Files/Reports/2006/PIP_Online_Dating.pdf.pdf. Accessed 1 May 2010.

McIntosh, W. D., I.P. Salvatore, and S.B. Wilson. 2007. Dating across race: An examination of African American internet personal advertisements. *Journal of Black Studies* 37 (6): 964-82.

Milan, A., H. Maheux, and T. Chu. 2010. A portrait of couples in mixed union. *Component of Statistics Canada* Catalogue no. 11-008-X. Ottawa. http://www.statcan.gc.ca/pub/11-008-x/2010001/article/11143-eng.pdf. Accessed April 25, 2011.

Nakamura, L. 2002. *Cybertypes: race, ethnicity, and identity on the internet*. New York: Routledge.

Nakamura, L. 2006. Cultural Difference, Theory, and Cyberculture Studies: A Case of Mutual Repulsion. In *Critical Cyberculture Studies*, eds D. Silver and A. Massanari. New York: NYU Press.

Park, E. R. 1924. The Concept of Social Distance As Applied to the Study of Racial Attitudes and Racial Relations. *Journal of Applied Sociology* (8): 339-344. http://www.brocku.ca/MeadProject/Park/Park_1924.html accessed July 20, 2010.

Passel, J.S., W. Wang, and W. Taylor, P. 2009. Marrying Out. Pew Research Center. URL: http://pewresearch.org/pubs/1616/american-marriage-interracial-interethnic.

Accessed 3 August 2010.

Rudder, C. 2009. How your Race Affects the Messages You Get. URL: http://blog.okcupid.com/index.php/2009/10/05/your-race-affects-whether-people-write- you-back/. Accessed 3 March 2011.

Silver, D. 2006. Where is internet Studies? In *Critical Cyberculture Studies*, eds D. Silver & A. Massanari, New York: NYU Press

Star, S. and G. C. Bowker. 1999. *Sorting things out: Classification and its consequences*. Cambridge, Mass: MIT Press.

Star, S.L. 1999. The ethnography of infrastructure. *American Behavioural Scientist*. 43 (3): 377-391.

Star, S L., and G. Bowker. 2007. Enacting silence: Residual categories as a challenge for ethics, information systems, and communication. *Ethics and Information Technology*, 9(4): 273-280.

Star, S. L. 2010. This is not a boundary object: Reflections on the origin of a concept. *Science, Technology, & Human Values*, 35(5): 601-617.

Turkle, S. 1995. *Life on the screen: Identity in the age of the internet.* New York: Simon & Schuster.

Turkle, S. (2011). *Alone together*. New York: Basic Books

Watkins, C.S. 2009. *The young and the digital: What the migration to social network sites, games, and anytime, anywhere media means for our future.* Boston: Beacon Press.

Winner, L. 1985. Do artifacts have politics? in *The Social Shaping of Technology*. eds. MacKenzie, Donald and Wajcman. Buckingham, England: Open University Press

Yancey, G. 2007. Homogamy over the net: Using internet advertisements to discover who interracially dates. *Journal of Social and Personal Relationships*, 24(6): 913-930.

Yancey, G. 2002. Who interracially dates: An examination of the characteristics of those who have interracially dated. *Journal of Comparative Family Studies*, 33(2): 179-179.

Zachry, M. 2008. An interview with Susan Leigh Star. *Technical Communication Quarterly*, 17(4): 435-454

The field site as a tool: mixed methods in social network studies

Andreas Kramm

The increasing adoption of blogs by Internet users during the last seven Millions of users worldwide engage in social network sites (SNS). This paper addresses the question of what methods may be considered adequate for undertaking research in this field by referring to an ongoing interdisciplinary research cooperation between the Fraunhofer Institute for Secure Information Technology SIT, Darmstadt, and the Department of Cultural Anthropology and European Ethnology at Goethe University, Frankfurt am Main. In this research we employ a mixed methods approach and understand SNS as a field site and a tool. These presumptions enable us to examine the so-called 'privacy paradox' phenomenon, which will be discussed next.

Keywords: social network sites, blogs, research methodologies

1. Introduction: Privacy and social network sites

Millions of users worldwide engage in social network sites (SNS) on a regular basis, and activities such as reading and writing messages or checking requests have become a part of many people's daily routine. As SNS have increasingly attracted the attention of social studies, new methodological issues have come to the fore (boyd and Ellison 2007). This paper addresses the question of which methods may be considered adequate for undertaking research in this field. As a case in point, the paper presents the ongoing interdisciplinary research cooperation between the Fraunhofer Institute for Secure Information Technology SIT, Darmstadt, and the Department of Cultural Anthropology and European Ethnology at Goethe University, Frankfurt am Main. In this research we focus on two SNS, 'StudiVZ' and 'Facebook'. [1]The study aims to gain a deeper insight into SNS users' practices, motives, competences, and concepts of privacy. For this purpose, we employ a mixed method approach combining ethnographic methods with technical modelling, conceptualizing SNSs both as a field site (an actual research site for observation and connecting to interviewees) and a tool (for collecting technical data). In line with previous research (Barnes 2006; Utz and Krämer 2009), we observed users' paradoxical behavior relating to privacy concerns on SNS. We detected a discrepancy

between users' desire for privacy and their actual behavior neglecting privacy hazards.

The next sections present our theoretical assumptions, followed by our experiences with the methods employed in the project to date, and the discussion of their advantages and disadvantages inherent in our study. In line with our focus on the 'privacy paradox', I will also ask whether users' privacy concepts are not at work in practice or whether the users do not understand the privacy settings provided.

2. Studying privacy issues in SNSs

Our study contributes to the research on communication processes and privacy issues in SNSs and the specific implications for individuals' informational self-determination in these types of technical environments. The aim of our project is to investigate whether users are in a position to achieve their desired privacy level with the technical tools provided, and are thus capable of exercising their right to informational self-determination. This approach entails taking into account both the technical facilities provided by a given SNS and their users' concepts of privacy. Therefore we have to provide a methodological and theoretical framework combining users' privacy concepts and the technical aspects of SNS.

2.1 Definitions of privacy

Classical definitions of privacy are 'the right to be let alone.' (Brandeis and Warren 1980, 193), 'the claim of individuals [...] to determine for themselves when, how, and to what extent information about them is communicated to others.' (Westin 1967, 7), or the 'control we have over information about ourselves' (Fried 1968, 475). These and similar definitions are challenged under new technical conditions facilitating online storage of huge amounts of information. Online privacy expert Helen Nissenbaum argues that in order to understand privacy issues in online environments we have to take into consideration that privacy depends on 'contextual norms' which are the basis for an individual deciding when, where, and under which circumstances information provided by her should be accessible (Nissenbaum 1998, 20). As 'contextual norms' are highly context-specific, and therefore highly variable, complex, and dependent on individual interpretations, qualitative, non-standardized research methods are required because they emphasize actors' perspectives instead of starting out with preconceived categories. We suggest that an analysis of the technical foundation of SNSs alone does not suffice and therefore apply Nissenbaum's approach to privacy in our research aiming to explore the contextual norms underlying privacy concepts of SNS users.

We also acknowledge that users

interact with technical settings and alter them according to their evolving needs, e.g. by finding more nuanced mechanisms to technically restrict access to their data than those provided by the application they use. Media researcher Patricia Lange mentions the use of few or cryptic tags by YouTube users to restrict access to their videos as a case in point (Lange 2007). We suggest that this approach allows for innovative ways to find out about the actual privacy management requirements of SNS users.

2.2 SNS as a field site and a tool

One central aspect of our research is to conceive of SNSs as both a field site and a tool. In referring to SNSs as a field, we follow ethnographic theory criticizing the notion of 'the field site' as a location that ethnographers 'just wander onto [...] to engage in a deep and meaningful relationship with 'the natives' (Gupta and Ferguson 1997, 5). Instead, this theory emphasizes the 'complex processes that go into constructing [the field]' (Gupta and Ferguson 1997, 5). Thus, the advantage of cultural anthropology lies 'in its attentiveness to epistemological and political issues of location', and less in a commitment to 'the local' (Gupta and Ferguson 1997, 39). Ethnographies of new types of technologically enhanced social formations like SNSs clearly demonstrate the need for a multi-sited approach. A 'conventional single-site mise-en-scene of ethnographic research' (Marcus 1995, 99) is of little use when research settings are multi-sited, heterogeneous, and socio-material. In order to explore sites like SNS, we suggest that ethnography must move 'from its conventional single-site location [...] to multiple sites of observation and participation' (Marcus 1995, 95) in order to 'meet the needs of the present' (Gupta and Ferguson 1997, 40). Hence, we perceive SNSs not as a single-site and physical place but as a multi-sited setting constituted by social interaction. By following this approach we are able to concentrate on the users' experience of social interaction mediated by SNS.

Social interaction on SNS includes the sharing of opinions, ideas and data. Therefore they provide a huge potential both for capturing data, and for contacting potential interviewees. In this way, SNS are a tool to collect data and to get in touch with users. SNSs make available for analysis content such as profiles and pictures, or data from sources like 'Facebook fails' and thus facilitate a better understanding of users' management of personal information and privacy. 2 To date, our investigation has made use of multiple data sources: on the one hand semi-structured, open-ended interviews, participant observation, and diary studies; on the other, we collected a variety of technical data on, among other things, profiles and photos stored online, discussions

(e.g. on Facebook 'walls'), and tactics like logging in under a pseudonym to avoid privacy related conflicts. We also applied a software tool to record the privacy settings of interviewees, and then discussed with them whether the settings actually concurred with their intentions. In line with a user-centred approach, we also plan to provide opportunities for SNS users to comment and discuss our research.

SNSs can be both a field site and a tool. They are a field site in the traditional sense of a location that researchers can actually wander into and engage with the 'natives'. However, SNSs are not a geographical location per se, but are co-constituted or co-produced by many interacting actors – human and technical – without which they would not exist (Jasanoff 2004). Researchers, therefore, will have to tackle the epistemological question of field construction. SNSs are also, in a very material sense, a (technical) tool in that the underlying technology facilitates data collection in ways not possible before opening up new opportunities for following the actors (the users) (Eagle and Pentland 2006). The idea of SNSs as a field site and a tool reflects the socio-technical or socio-material stance of our research. Moreover the technical read-out of users' privacy settings (described in section 3.1.2.) , based on the conception of SNS as a tool, points to users' paradoxical behavior towards privacy

concerns.

2.3 Ethnographically informed research

To understand users' privacy concepts, we adopted the 'ethnographic premises' (LeCompte and Schensul 1999) in our investigation. That is, we employed ethnographic methods including observation as well as face-to-face interviewing to get insights into users' perceptions of their actions as well as into their social contexts. Insofar as we applied ethnographic methods in our research practice, we were 'ethnographically informed', but we did not conduct a classical ethnography. In using the term 'ethnographically informed', we refer substantially to debates in the fields of Participatory Design, Human-Computer Interaction research and Computer Supported Cooperative Work. In these fields researchers both from the computing and social sciences share an interest in 'technical explorations and ethnographically informed investigations of technology-intensive sites of social action' (Suchman 2007, 276), and emphasize an 'inquiry from within' (Büscher and Urry 2009, 106). It is widely acknowledged in this community that ethnographic accounts can systematically inform system design and development (Iqbal et al. 2010), particularly by conducting empirical studies of actual practice and by doing in situ observations using multiple methods (Robinson

et al. 2007).

The concept of 'ethnographically informed' research was introduced into the debate in the early 1990s by a group of researchers from both software engineering and social sciences. They defined 'ethnographically informed design' as 'the application of sociological approaches to systems development' (Viller and Sommerville 2000, 171) pointing out that 'human, social, and political factors have a significant impact on software systems design' (Viller and Sommerville 2000, 169). They employed ethnographic studies in a series of projects in order to inform their systems design processes, particularly for cooperative settings (Viller and Sommerville 2000, 169). They aimed at bringing ethnographic studies closer to the design process (Viller and Sommerville 2000, 171), arguing for 'a method that is informed by ethnography, rather than modify ethnography to suit the needs of [software systems] design' (Viller and Sommerville 1999, 12). They saw the specific advantage of ethnographic methods in their capacity for detailed accounts of practice and in taking into account seemingly mundane aspects of accomplishing actions, resulting in an improved understanding of the way in which settings are socially organized (Viller andSommerville 2000, 172). Our own research practices draws substantially on achievements in this field.

Ethnographic methods today have become increasingly accepted in technology design, particularly in the field of Human-Computer Interaction, in order to take into account users' needs, abilities, and wishes. Proponents of this approach argue that users' needs have often been neglected (Forsythe 1992; 1999). In our study, improving our understanding of users' models and concepts of privacy in the context of SNS is paramount in order to analyse how technical systems and humans interact, and to suggest improved privacy protection tools. By comparing users' privacy concepts and their actual behavior in interaction with technical systems, we address the question whether the users are cognizant of the possibilities of SNS' privacy settings.

2.4 Cyclic process of data collection

We approached users' privacy concepts as an ongoing process of interpretation. Therfore our research is informed by the 'grounded theory' approach. In a cyclic process of data collection, analysis, and theory construction, theories are 'grounded' in empirical data, that is, in the social reality of the research participants (Glaser and Strauss 1967). This approach is considered to be an appropriate way to investigate complex communication contexts like SNS, and other similar privacy problems where users' beliefs, ideas, and needs as well as technological requirements are at is-

sue (Krotz 2005, 159). With these contexts being highly dynamic, and in constant flux, they provide particular challenges. In the course of our research into privacy concepts of Facebook users, for instance, Facebook changed its privacy protection features. Users' interpretations of privacy in the context of SNS, therefore, require repeated re-evaluation. We conceive of users' diverse practices of handling online privacy issues as a process. On the basis of the empirically collected data, a 'grounded' thesis can then be iteratively developed (ibid. 163).

3. An overview of the methods used

In the following section I providea detailed overview of the methods we used in our ongoing interdisciplinary research project. The idea of SNS as a field site and a tool informed the use of a combination of interviews and a technical read-out of the users' privacy settings. This approach allows further investigation into the 'privacy paradox'. In order to understand the interplay between technical opportunities and users's mental concepts, teamwork between computer scientists and cultural anthropologists is beneficial. Being part of the field and conducting diary studies enriches our understanding of users' privacy concepts and their actual behavior.

3.1 Our experience
3.1.1 Semi-structured, open-ended interviews

The first method we made use of in the study was semi-structured, open-ended interviews. The two graduate students who worked for the initial research team were themselves SNS users, and therefore familiar with the setting; this is considered to be an advantage in a variety of ways (Burrell 2009, 190). In order to get a wider range of ideas we discussed the interview questions in an undergraduate seminar on methods, which is part of the curriculum of the department for cultural anthropology at Frankfurt University. The students contributed in important ways to finding the right interview questions, and helped to avoid or minimize the effect of unduly influencing or channelling the interviewees' responses.

Qualitative interviewing regards interviewees as experts of the issues under consideration (Bauer 1996, 2). As the students are all users of an SNS, their statements were considered to be experts' statements. The set of interview questions included applications, privacy settings, and privacy problems experienced in SNSs. Using the same list of basic questions for all interviews facilitated the analysis of the material.

Non-standardized interviews try to minimize the problem of interviewees forming an opinion of what they believe the interviewers want

to know and responding accordingly (ibid. 9). Therefore, neither did we prescribe the order of the interview, nor did we impose a vocabulary. For instance, we did not introduce the term 'privacy', in order to avoid implying that the respondents were affected by privacy issues in the SNS they use.

Additionally a particular problem is posed by the ubiquitous media discourse on online privacy and security issues. Many respondents presented themselves as cautious users, acutely aware of privacy concerns. We were curious to find out whether in answering our questions, they tried to conform to the standards expressed in the media discourse. In order to find out if this was true, we matched their statements with their actual privacy settings in the SNS. This procedure is described in detail in section 3.1.2. .

We not only asked for students' input to the interview questions, but they also conducted interviews themselves as one of the assignments of the course based on the list of open interview questions we had developed together. The results were very conducive to our study in two ways. Firstly, we received valuable information on how to modify our interview questions for the next research round, and secondly, some of the findings were extremely helpful in focusing the research.

In addition to the interviews conducted by the students we conducted a series of explorative, open-ended interviews, in order to generate a list of relevant questions which were improved in the process. This list was then used in another series of ten interviews. The interviews conducted to date have helped our understanding of privacy management issues and user requirements, by eliciting a series of aspects to which we will adapt our future research strategies.

3.1.2 Technical read-out of privacy settings

At the start of the investigation we created a software that enabled us to automatically identify our interviewees' privacy settings in order to gain a quick overview of their privacy settings without going into detail. A modified standalone version of the internet browser Firefox served to save privacy settings. The software could be directly started from a USB-stick or a CD without previous installation on the participant's computer. After reading out the configuration from Facebook, the software presented the data as a human-readable text to the interviewer and the interviewee. In this way, the respondents could be sure that the interviewer only read the configuration and no other private data. Moreover, because no installation was necessary in advance, the respondents could also be sure that the tool would not pose a threat to their computer. However, shortly after we finished programming the tool, Facebook radically modified its

privacy settings. As a consequence, the automatic read-out of the privacy settings ceased to work. Such constant changes point to the need for a cyclic process of data collection (as discussed in section 2.4.). As the technical aspects of SNS are modified, researchers have to re-evaluate the users' interpretations of these changes. To supplement both our tool and the open-ended interviews outlined in section 3.1.1., we compiled a standardized questionnaire on paper, based on the privacy settings available on the two SNSs 'StudiVZ' and Facebook. After each non-standardized interview, the interviewers additionally went through the standardized questionnaire with the interviewees, comparing their intended privacy settings with the actual configuration.

Matching the respondents' interview statements with the data gained by the checklist allowed us to uncover discrepancies (Axinn 2006). Many informants who presented themselves as well informed about privacy problems in social networks were actually quite surprised about the features privacy settings offered and many were not aware of their personal privacy setting opportunities. This was apparent in several interviews in which the interviewer asked the participants to comment on their profiles on Facebook or the German network StudiVZ. One of the participants, for example, who introduced herself as very aware of privacy problems in SNSs could not even find the privacy settings section in Facebook. We found that the full range of privacy setting options was not used by most of the participants.

One possible interpretation of the findings is that participants were anxious to seem well-informed about privacy settings because they believed that this was what the interviewers expected of them. However, many were not informed. Rather, they often referred to issues discussed in public debates on SNSs and their dangers. Applying a mixed methods approach we were able to find that the participants were aware of problems, but did not apply their knowledge to their actual practice. Using both methods, the open-ended interview and the standardized questionnaire, allowed a more realistic understanding of the actual practices of the respondents. Furthermore this procedure alludes to the question whether users are not in a position to put their concepts in practice.

3.1.3 Teamwork issues

These findings were strongly influenced by the teamwork between computer scientists and anthropologists. By matching users' answers to their actual practice, we revealed the 'privacy paradox'. But working as a team also brought along specific challenges. In our case, we began by separating the interviews from their analysis; that is, one person undertook the interviews and

another analysed them. However, it soon became obvious that it was more efficient when both activities were carried out by the same person. For our purposes, teamwork turned out to be more appropriate in situations when researchers compared their findings, bringing in their tacit knowledge, theory and subjectivity, all of which affect the outcome of the analysis (LeCompte 2000, 147). This type of teamwork, we suggest, encourages reflexivity of the participants. Particularly, team meetings between the computer scientists and the anthropologists were geared to explain different disciplinary approaches. For instance, methods, which had been taken for granted by the anthropologists, had to be explained and their feasibility was discussed. This debate expanded our knowledge about weak and strong aspects of our methods and allowed both disciplines to benefit from each other's expertiseThe most relevant result of our discussions was the technical tool discussed in section 3.1.2. This tool consisted of a technical read-out to capture the privacy settings of the interviewees, developed by the computer scientists. With the help of the technical read-out, we were able to uncover discrepancies between the intended and actual privacy settings of the users interviewed.

3.1.4. Being part of the field

Some members of our research team had been regular users of Facebook and/or StudiVZ before the start of the project, and were familiar with the field site. Anthropological research literature has discussed, extensively, the challenges of being well acquainted with, or 'native' to, the field, and requires that researchers reflect on this issue critically. Researchers actively engaged in the domain they make their object of study, share a cultural setting with their research subjects. On the one hand, researchers are no longer the professional strangers of classic ethnography but rather become observing participants; on the other hand, research subjects cease to be the classic informants, but rather become partners in research. Most participants of our study were students, which reflects a degree of pragmatism as regards availability and motivation. We suggest that participating in SNSs allowed us to get a well-rounded idea of both the technical environment and users' practices (Suler 1999).

Our approach was to follow the premise of experiencing SNSs like most users do (Garcia et al. 2009, 60). By being part of the social situation, we became aware of information, which is often not considered useful or relevant (Spradley 1980, 55). For example, by regularly using SNSs we recognized that many people shared 'posts' in foreign languages. This excluded all users who were not capable of understanding these languages. This procedure could be understood as using a

very easy mechanism as mentioned in 2.1. to restrict access to data instead of using the mechanisms provided by the SNS.

Anthropologists, as well as science studies scholars, raise the question whether researchers can be part of a social situation and observe it at the same time (Tedlock 2000, North 1994). We suggest that by applying a mixed method approach we may be able to offset some of the effects connected with being both inside and outside the field.

3.1.5. Data about actual usage patterns: conducting diary studies

We also experimented with diary studies in order to capture participants' actions in situ (Carter and Mankoff 2005, 899). Diary studies provide a way of gathering information about people and their activities. This technique allows users to self-report, such as in a study on mobile phone use for which Mizuko Ito and Daisuke Okabe used 'communication diaries', and found them to be a useful instrument for receiving extensive information about communication habits (Ito and Okabe 2003). We expected to find, and did find, that diary studies did indeed greatly enrich our data, particularly those on usage patterns gained in the semi-structured, open-ended interviews. However, it is not always easy to recruit people for diary studies, because they are somewhat

time-consuming.

Participants in our diary studies were asked to record their daily actions on SNSs. We developed a basic grid to be filled with the data by participants. We encouraged them to note how often, and how long, they were active in SNSs, and also to record their particular actions, special incidents, and their thoughts when they were about to publish data, e.g. a comment.

Our diary studies show that SNSs for many people constitute a central part of their everyday life, similar to the findings of Miller and Slater (2000) on the use of the Internet (Milller and Slater 2000, 5). Additionally, the diary studies delivered data about reasons for not using SNS. We asked the students, who had been part of the undergraduate seminar in which we discussed our set of interview questions, to be part of our diary studies. Some students do not use any SNS. Therefore they explained their reasons why they do not use SNS. Most answers relate to privacy concerns. Additionally diary studies exhibited the absence of privacy concerns in daily routines. Even though we asked the participants to note privacy concerns in daily routine, almost no one recorded privacy concerns as a reason for not publishing content.

3.2. Research methods for future inquiry

These findings give raise to the interpretation of the users' para-

doxical behavior. As already mentioned, public debates about privacy concerns may be understood as a factor, which induces the interviewees to present themselves as well-informed. The users' disability to deal with the privacy settings provided may be an other explanation. However, further inquiry is needed.

Conventionally, field work is associated with face-to-face interactions of the researchers and those being researched, and participant observation of the everyday life of a given group of people by the researchers (Bailey 2007). However, with studies increasingly conducted in online environments, and with communication moving online, the need for appropriate methods for research in such environments is widely discussed. In our study, we use a mixed method approach to capture users' increasing daily online interactions (Murthy 2008, 849). Combining offline and online research methods, we will be able to collect interesting data on both users' concepts of privacy and their actual behaviour.

3.2.1. Online interviews and e-mail interviews

One advantage of online and e-mail interviews is that they allow researchers to collect a fair amount of statements concerning privacy issues within a short time, offering the additional advantage that time-consuming interview transcription does not have to be made because responses are already in writing

(Murthy 2008, 842). Also, some researchers have found that respondents often prefer to answer sensitive topics, such as being uniformed about privacy settings, online rather than face-to-face (Ehlers 2005). However, we have to bear in mind that text-based questions are more direct than in face to face situations. Therefore, we have to find ways to ensure that questions in a text-based environment do not unduly channel responses. First of all, questions should be as open as possible. Another option is to not pose questions, but rather ask participants to jot down their ideas on a specific topic. Of course, many other issues have to be taken into account, not least the question of missing body language in text-based settings.

3.2.2. Capturing participant observation by media

Capturing a respondent's use of SNSs, e.g. by video, or adopting the method of 'thinking aloud', are further approaches for observing activities in context. Thus this method provides an opportunity to uncover uncertainties in handling privacy settings.The method of thinking aloud involves the participant continuously thinking out loud while using the system. By verbalizing their thoughts, we may get interesting clues as to how they perceive the system.

'Thinking aloud' facilitates questions on usage decisions, in situ. This method also permits the users

to comment on and assess their actions themselves (instead of the researchers), giving participants much more leeway to state their views. In return, this provides the researchers with a better understanding of the users' perception of a given system. Film and video have become accepted tools in social sciences, particularly in workplace studies. Video cameras are also a common tool in usability labs. Cameras are positioned so as to capture images of the screen, the keyboard, the user's face and body movements, etc. The idea is to be as unobtrusive as possible. The output, typically, is a video recording of users' interactions with the system. To make sense of data, the researchers must have criteria upon which to base their assessment. Recording users' actions on SNSs on video may provide us with information about usage patterns which may be less constructed than answers in interviews.

3.2.3. Usability tests for further insights

We also considered eye-tracking and mouse-tracking techniques to gain a better understanding of users' actions on SNS. Eye-tracking is widely used in the scientific community, in marketing, and in usability studies, commonly when a detailed evaluation of visual search is required. Mouse tracking differs from eye tracking in that a user's mouse movements are recorded instead of their eye movements. What we

may be able to find with these techniques is whether the users are able to find the information they need. Eye- and mouse-tracking might uncover whether privacy settings are arranged in a way that permits users to make informed choices. These questions arose in our interviews as some interviewees were not able to show their privacy settings to the interviewer because they simply could not find them. This problem is an issue concerning the usability of privacy tools, and may be solved by a more adequate interaction design.

4. Conclusion: The field site as a tool

To conclude, qualitative research on privacy issues in SNS clearly cannot do without qualitative methods developed for offline situations. Yet it would also not be feasible to ignore the challenges posed by research in online environments. The set of mixed methods we employed in our study to date, has allowed us to follow SNS users' actions and interactions. Employing a mixed method approach in an interdisciplinary cooperation has facilitated a wider understanding of concepts and practices of SNS users. For instance, the combination of the technical read-out of privacy settings in conjunction with in-depth interviewing lends itself to exploring the question of if, and how, the media discourse about online privacy affects respondents' self-presentation and self-perception. We uncovered

that the participants' answers, but not their actual behaviour, were in agreement with the standards of the discourse.

Using SNSs not only as field but also as a tool, enables SNS researchers to combine their findings based on ethnographically informed methods with the findings based on technical data sources. This approach could help to expose privacy problems which are not yet properly recognized. In our context, the mixed methods approach of combining the findings from our interviews and those from the technical read-out, helped us to recognize that the bigger part of the SNS users interviewed by us were not cognizant of the features that exist for the protection of their privacy.

Endnotes

1 StudiVZ' is a German social network site, in use since 2005 and aimed primarily at university students. As most interviewees use Facebook, we are now concentrating on this SNS. 2 Google-search results with the term 'Facebook fails' show a collection of more or less funny conversations on profiles, which maybe should not have been publicly available. Most cases are caused by a lack of knowledge of privacy settings. There are websites collecting these 'fails'.

References

Axinn, W. G. and L. D. Pearce, eds. 2006. *Mixed Method Data Collection Strategies*. Cambridge: Cambridge University Press.

Bailey, C. A. . 2007. *A Guide to Qualitative Field Research*. Thousand Oaks, Ca: Pine Forge Press.

Barnes, S. B. 2006. A privacy paradox: Social networking in the United States. First Monday Vol.11 http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1394/1312 (accessed October 6, 2011)

Bauer, M. 1996. The Narrative Interview: Comments on a technique for qualitative data collection. *Papers in Social Research Methods: Qualitative Series* no 1: 2-19.

boyd, d. m. and N. B. Ellison. 2007. Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication* 13(1).

Brandeis, L. and S. Warren. 1890. *The Right to Privacy. Harvard Law Review* Vol. 4 (no. 5)

Burrell, J. 2009. The Field as a Network: A Strategy for Locating Ethnographic Research *Field Methods* 21 (2): 181-199.

Büscher, M. and J. Urry. 2009. Mobile Methods and the Empirical. *European Journal of Social Theory* 12(1): 99-116.

Carter, S. and J. Mankoff. 2005. When Participants Do the Capturing: The Role of Media in Diary Studies. *CHI 2005/ Papers: Understanding Users and Usage Patterns*

Denzin, N. K. 2004. *Reading Film: Us-*

*ing Photos and Video as Social Science Materia*l.

Flick, U. , E. v. Kardorff and I. Steinke, eds. *A Companion to Qualitative Research*. London: Sage.

Eagle, N. and A. Pentland. 2006. Reality mining: sensing complex social systems. *Personal and Ubiquitous Computing* 10:255-268.

Ehlers, U. D. 2005. Qualitative Onlinebefragung. Mikos, L. und C. Wegener, eds. *Qualitative Medienforschung. Ein Handbuch:* 279-290. Konstanz: UVK.

Fried, C. 1969. *"Privacy" in Law, Reason and Justice: Essays in Legal Philosophy*. New York: New York University Press

Forsythe, D. E. 1992. Blaming the User in Medical Informatics: The Cultural Nature of Scientific Practice. Knowledge and Society: *The Anthropology of Science and Technology* (9): 95-111.

Garcia, A. C. , A. I. Standlee, J. Bechkof and Y. Cui. 2009. Ethnographic Approaches to the Internet and Computer-Mediated Communication.*Journal of Contemporary Ethnography* 38 (1): 52-84.

Glaser, B. and A. L. Strauss, eds. 1967. *The discovery of grounded theory.* Chicago: Aldine.

Gupta, A. and J. Ferguson. 1997. Discipline and Practice: 'The Field' as Site, Method, and Location in Anthropology. In Gupta, A. and J. Ferguson, eds. *Anthropological Locations. Boundaries and Grounds of a Field Science.* Berkeley, London, Los Angeles: Univ. of California Press

Ito, M. and D. Okabe. 2003. Technosocial Situations: Emergent Structurings of Mobile Email Use. In. Ito, M. Matsuda, and D. Okabe, eds. *Personal, Portable Intimate: Mobile Phones in Japanese Life*. MIT Press.

Iqbal, R. , J. Halloran, N. Shah and A. E. James. 2010. Ethnographically informed agent based computational model for collaborative systems. *Proceedings of SMC'2010:* 3235-3241.

Jasanoff, S. 2004. The idiom of co-production. Jasanoff, S. States of Knowledge. *The co-production of science and social order.* London: Routledge

Krotz, F. 2005. *Neue Theorien entwickeln: Eine Einführung in die Grounded Theory, die Heuristische Sozialforschung und die Ethnographie anhand von Beispielen aus der Kommunikationsforschung.* Köln: Halem Verlag.

Lange, P. G. 2007. Publicly private and privately public: Social networking on YouTube. J*ournal of Computer-Mediated Communication,* 13(1), article 18

Le Compte, M. and J. S. Schensul, eds. 1999. *Designing and Conducting Ethnographic Research.* Plym-

outh: AltaMira Press.

LeCompte, M. 2000. Analyzing Qualitative Data. *Theory into Practice* 29 (3): 146-154.

Marcus, G. E.1995. Ethnography in/of the world system: The Emergence of Multi-Sited Ethnography. *Annual Review of Anthropology*, 24: 95-117.

Murthy, D. 2008. Digital Ethnography: An Examination of the Use of New Technologies for Social Research. *Sociology* 42 (5): 837-855.

Miller, D. and D. Slater, eds. 2000.*The Internet. An Ethnographic Approach.* Oxford: Berg

Nissenbaum, H. 1998. Protecting Privacy in an Information Age: The Problem of Privacy in Public. *Law And Philosophy* 17: 559-596.

North, T. 1994. The Internet and usenet global computer networks: An investigation of their culture and its effects on new users in higher education. Master Thesis: Curtin University of Technology

Robinson, H. , J. Segal and H. Sharp. 2007. Ethnographically-informed empirical studies of software practice. *Information and Software Technology*, 49(6): 540-551.

Spradley, J. P. 1980. *Participant Observation*. New York: Holt, Rinehart and Winston.

Suchman, L. 2007. *Human-Machine Reconfigurations: plans and situated actions.* Cambridge: Cambridge University Press.

Suler, J. 1999. One of us: Participant observation research at the palace. *Psychology of Cyberspace* 1 (5). http://users.rider.edu/~suler/psycyber/partobs.html (accessed October 6, 2011)

Tedlock, B. 2000. Ethnography and ethnographic representation. N. Denzin and Y. S. Lincoln, eds. *Handbook of qualitative research.* Thousand Oaks, CA: Sage.

Utz, S. and N. Krämer. 2009. The privacy paradox on social network sites revisited: The role of individual characteristics and group norms. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 3(2), article 1.

Viller, S. and I. Sommerville. 1999. Social Analysis in the Requirements Engineering Process: From Ethnography to Method. *Proceedings of the 4th IEEE International Symposium on Requirements Engineering*: 6-13.

Viller, Stephen and Ian Sommerville. 2000. Ethnographically informed analysis for software engineers. *International Journal of Human-Computer Studies*, Vol. 53 (1): 169-196.

Westin, A. 1967. *Privacy and Freedom.* New York: Ateneum.

From 'Virtuality' to Practice: Researching the Intranet as a
'Socio-material Assemblage'

Katja Schönian

This article aims to defend a practice-based understanding of software applications in general, and of intranets in particular. Recently, the notion of practice has become prominent, not only in the area of Science and Technology Studies (STS), but in social theory in general. It rests on the understanding that the social has to be analysed as an ongoing accomplishment which transpires through situated, local activities. Artefacts are conceptualised as part and bearer of these activities and refer to the socio-material dimension of practices. This article, therefore, presents the relevant literature on the utility of practice theory for software research. Furthermore, it outlines methodological implications that stem from the conception of practices by introducing the idea of a 'praxiography'. This discussion takes place in the context of an ongoing investigation of collaboration software which explores a company's intranet in different departments in which it interacts with a variety of work practices. Overall, the article will present the practice theoretic perspective as an appropriate research stance for social scientific research of software applications. It concludes by looking at the challenges practice-based research has to tackle.

Keywords: practice theory, socio-materiality, praxiography, assemblage, organisation studies, intranet software, software studies.

Introduction

As the Internet has grown, theories about it have accumulated, treating it as a utopian realm of simulation with yet unknown possibilities (Turkle 1995, see also Bühl 1996). The emergence of numerous websites and their software applications caused an enthusiastic engagement with the World Wide Web (Luke 1999). Notions such as *virtual reality* and *cyberspace* dominate the literature and the understanding of the Internet and the computer in the 1990s. For example, Howard Rheingold's book *Virtual Reality* (1992) displays this enthusiasm when he describes his experiences with the Internet and the changes he anticipates. He explains, 'it might be the gateway to the Matrix. Let us hope it will be a new laboratory of the spirit – and let's see what we can do to steer it that way.' (Rheingold

1992, 391). This statement exposes the excitement towards the Internet that was predominant during this time. Moreover, Manuel Castells' description of the 'Network Society' (2000) similarly presents an understanding of events happening on the screen as totally disembodied from so-called 'offline' life. However, this characterisation led to an understanding of the Internet and related software applications as a virtual realm, ascribing the computer a hidden agenda operating behind the screen and making various effects and events possible.

In this article, I will critically discuss understandings of the computer and software. I critique a notion of the 'virtual' which is seen as a separate realm, detached from people's day to day activities. Instead, I propose a practice-based understanding that considers software as being very much *attached* to people's lives, while shaping and influencing their activities. I proceed by first of all referring to ethnographic research on software usages where the material dimension of software is emphasised. However, ethnographic research mostly lacks an explicit account on practices, which is why I provide an insight into key conceptualisations within practice theory, especially in relation to research on technologies in organisations. As I aim to work out the methodological implications stemming from a practice-based research approach, I will introduce the idea of a 'prax-

iography' (Mol 2002), a strategy for ethnographic research on socio-material practices. As I will show, the praxiographic inquiry is relevant for an investigation into software applications since it follows the practices that first of all bring about the software as a specific artefact. The vocabulary for this undertaking is presented in relation to my (ongoing) research on intranet software in a company working in the telecommunication industry. Since I have just begun data gathering, the proposed approach stays, in some parts, preliminary. I end with outlining challenges for practice-based research.

Resting upon concepts in Science and Technology Studies (STS) as well as research on software applications, particularly intranets, my project contributes to recent literature based on insights and understandings developed within science studies utilised for organisational and management research (cf. Orlikowski 2007, see also Harris 2005). In addition, it aims to add, within organisation studies, to a growing attention on actual work practices instead of giving priority to theoretical conceptions (Nicolini 2009, 1391). Even though the praxiographic research perspective I propose here is not genuinely new, the way it brings together different sub-disciplines in the social sciences, such as media research, organisations studies and STS, functions as an interdisciplinary approach

which is of value for a diverse array of research settings on software applications.

From 'virtuality' to practice

It is not surprising that ethnographic research on computer usages, and in particular online applications, has shown that treating the Internet as a virtual realm, detached from everyday life, does not do justice to its characteristics as an empirical phenomenon. That is, the notion of virtuality disguises the fact that the coding of software has a concrete reality when software is actually used. Moreover, it leads to overlook the interplay between the kinds of possibilities the design of software offers, and people's actual usage of this technology. Investigations into e-mail communication and chat rooms show that the Internet is treated as a concrete tool or practice rather than an activity in so-called 'cyberspace', separated from everyday activities:

> Trinidians, like others, may invest heavily in relationships and practices that only exist online: it is as breathtaking here as anywhere to find that the fiancée that has featured in several conversations with someone actually lives in the middle of Australia, and their relationship is based on hours of chatting on ICQ. That is to say, these spaces are important as part of everyday life, not apart of it. (Miller and Slater 2000, 7).

It becomes obvious that the relation between everyday life, and the software's capacity to act upon this life, is crucial when it comes to an understanding of software applications. Thus, the conversations taking place in instant messaging services such as 'ICQ' are happening as a concrete practice within everyday life, not apart from it in some 'virtual' reality behind the screen.[1] In a similar manner, David Machin criticises 'a romanticized image of the cybersurfer as a virtual human being fragmented in cyberspace' that prevents from viewing a certain practice on the Internet within the context in which it is embedded (2002, 124). However, in order to give an account on how 'virtual environments' and software in general are actually practiced in a variety of settings, research on software applications has to look into this interplay.[2] Therefore, this ethnographic approach carefully investigates the software's specific characteristics in relation to different usages and how, in turn, these characteristics restrict and shape people's activities.[3]

The idea to move beyond popular notions such as *virtual* or *cyberspace* when researching digital technologies is also picked up by the community of scholars describing themselves as 'Software Studies'[4]. As Matthew Fuller says in the introduction to the lexicon with the same title, the notion of the 'virtual', and a related understanding of the 'immateriality' of software, downplays the

mechanisms and effects software actually establishes (Fuller 2008, 4). He considers the materiality of software through an investigation into the design, the mechanisms and the assumptions transferred through a particular interface (Fuller 2008, ibid.). For instance, in the case of social network platforms, people are constantly asked to present themselves through various data uploads. Or, concerning open source software (OSS) where the source code is disclosed, the software is constantly modified and ported to new operating systems and processors. The software initialises activities such as sharing and even distribution across diverse settings, as well as shapes people's self-presentation on the Internet.

Investigating software from this perspective means examining its design, i.e. its interface and how it is entangled with other activities, devices and usages. As Matthew Fuller simply puts it, to leave behind the understanding of an immaterial or virtual existence of software entails 'to see what it is, what it does and what it can be coupled with' (2008, 5). More precisely,

> Rather than simply watch and make note on the humans lit by the glow of their monitors it aims to map a rich seam of conjunctions in which the speed and rationality, or slowness and irrationality, of computation meets with its ostensible outside (users, culture, aesthetics) but is not epistemi-

cally subordinated by it. (2008, 5).

The different aspects mentioned above highlight a perspective that does not solely analyse people's usages of software, as it tends to appear in the ethnographic research by Miller and Slater (2000) and Machin (2002) mentioned earlier. Rather, it indicates that software must *not only* be considered from the perspective of the user, but may be explored in terms of an understanding of the aesthetic it embodies, specific practices it creates, or other relations it meets in the course of its operations.[5]

To acknowledge the various relations the software generates implies ascribing a creative power not only to humans and their usages, but to the software, too. However, the notion of software studies does not refer to a material determinism that considers a software's operation exclusively in terms of its coding, as if a code is a concept that can be transferred from one place to another without changing. Rather, it suggests including in an analysis the properties made available through the software and the way they get attached to other events, people and objects. As Adrian Mackenzie points out, 'code itself inevitably slips into tangles of competing idioms, practices, techniques and patterns of circulation.' (2006, 5). That is, the code of a particular program does not exist in isolation, but relates when appropriated to interfaces, effects or usages. For example,

in the case of any software installed on a computer that first of all meets a specific processor, i.e. a particular execution unit, and is further adapted in relation to the particular setting it is part of.[6] This is why he claims that 'software in its specificity is not a given. What software does is very intimately linked with how code is read and by whom or what, that is, by person or machine.' (Mackenzie 2006, 6). From this perspective, software comes about through the various ways in which it *assembles* with other properties, usages and effects and in fact, with the *practices* in which it occurs. Indeed, it may be the virus, the hacker, or the software's weakness that can be all recognized as constituting forces triggering a breakdown (Mackenzie 2006, 10).

Practice theory

In a recent text on practice theory, Martha Feldman and Wanda Orlikowski (2011) distinguish between three different types of practice-inspired research. First, an empirical focus where the notion of practice stays rather implicit and the empirical phenomenon investigated is centre of research (cf. Weick 1993). Secondly, a theoretical focus where the notion of practice is made explicit in order to theoretically explain everyday activities and how they are generated, changed and sustained in time. Here, a variety of backgrounds such as Bourdieu's 'implicit logic of practice' (Bourdieu

1976), Giddens' 'situated practices' (Giddens 1984), but also ethnomethodology's attention to everyday practices (Garfinkel 1967; Lynch 2001), are seen as a reference for this focus. New approaches, such as Actor-Network Theory (Latour 2007) and Schatzki's site ontology, are also still seen as part of this account, even though Schatzki's elaborate work on social practices belongs to a third, namely a philosophical engagement with practices. Here, the practice theoretic understanding becomes an ontological statement where the world consists of and is only brought about through practices (cf. Schatzki 1996 and 2002).[7]

I use this classification to provide an overview of the rather diverse field of practice theory and moreover, to position the perspective I am proposing in this article.[8] The practice theoretic understanding I suggest, argues for an explicit theorisation of practices, as I have done in relation to ethnographic research on computer usages. Nevertheless, it is still very much aligned with the empirical case it studies, since it refrains from making too many assumptions beforehand and asks rather openly how the intranet is enacted within different working settings. In this manner it, in fact, looks at the everyday activities that first and foremost bring the software about. Hence, it pursues an empirical focus based on theoretical considerations. As it will be argued

below, the ontology it articulates is one that correlates with the practices, i.e. the doings and sayings that bring about the topic of interest – an 'object' such as software, a certain understanding of a disease, or any other concern (cf. Mol 2002; Marres 2004).[9]

A practice is defined as a 'nexus of doings and sayings' whereas the latter is seen as part of the former (Schatzki 1996, 89). Practice theorists vary in the way they present a rather sophisticated or less elaborated concept of practices, however, they jointly emphasize the situatedness of activities, being very much indebted to the context and situation in which they occur (Mol 2002; Suchman 2007, see also Schatzki 2002). Moreover, the informal logic of all practices is highlighted, since most activities rely fundamentally on the implicit knowledge emerging through practices. Bodies and artefacts have been dedicated as the main bearer of this knowledge and are therefore of great significance for an understanding of practices. In fact, this is why the description and analysis of social practices refer to the 'materiality' of all behaviour which happens by virtue of bodies and artefacts. From this point of view, the knowledge underlying practices is incorporated into human bodies. Moreover, it is a collective accomplishment, temporarily shared with material objects (Reckwitz 2003, 289-90). However, when it comes to describing the involvement of

material artefacts, practice theorists offer distinct illustrations; whether objects are not just part, but in the sense of a 'symmetrical anthropology' (Latour 1993), are also bearer of practices, is controversial (Reckwitz 2003, 298)[10].

'Socio-materialities'- a perspective on human and non-human actors

Examining how organisation studies take into account materiality, Wanda Orlikowski points out that it is either ignored, taken for granted or its impact minimized (2007). Moreover, when artefacts are studied, it appears to be always a special case, as if organisations do not engage regularly and daily with materiality (cf. Clash et.al 1994). Overall, existent approaches mostly fail to notice that 'materiality is not an incidental or intermittent aspect of organizational life; it is integral to it' (Orlikoswki 2007, 1436). In the case of research on information technology, effects or interactions with technology are cut off from the focus of the investigation. Orlikowski claims that these perspectives centre either on the technology or on the human engaging with the technology, as if both humans and technologies are always comprehensible and complete entities (cf. Barley 1986). Indeed, a reference to the local conditions under which a particular technology is practiced, is in fact missing. Moreover, technology is always part of historical and

cultural processes and does not exist in vacuum (Orlikowski 2007, 1437). To sum up, the work done by Orlikowski shows that when it comes to research in organisations, the material dimension of everyday practices has so far been neglected. Following Orlikowski, I want to argue that the material is important, especially for an understanding and theorisation of contemporary organisations, transpiring through a variety of information technologies and software applications.

In contrast to this, research done in the realm of Science and Technology Studies (STS) and 'workplace studies', have considered, since the 1980s, the material dimension of practices in the way that human and non-human actors assemble during a variety of work practices (cf. Wajcman 2006; Suchman 2007). Indeed, within this field, materiality is not only seen as part of, but as actively configuring practices. Relating to findings in science studies, Orlikowski (2007, 2010) proposes the notion of 'socio-materiality' to describe a web or network of social as well as material entities. It emphasises the relational capacities without ascribing a genuine substance or characteristic to either humans or non-human actors.

When leaving the idea of substances behind, one is able to look instead at the way associations in the organisation are established; not via some inherent substantial capacity in humans or artefacts, but through assembling and arranging practices. The quality of these associations must be seen as one of 'constitutive entanglement' i.e. a mutual engagement of artefacts and humans that bring about specific practices as well as artefacts (Orlikowski 2007, 1437). For Orlikowski, this view can be seen as a 'post-human' account that strives to 'decenter the human'; that is, it aspires to move beyond a framework that always tends to focus on the way people treat and deal with technology, questioning the 'ontological separation' of humans and artefacts (2007, 1438). As already stated, understanding technologies and software applications involves a more complex perspective than simply focussing on users, since, as argued above, software as well as users are configured through the practices in which they are part of.

I want to emphasise that this analytical shift provides a conception for empirical research on technologies and software applications in particular. From a methodological point of view, the notions of 'constitutive entanglement', and 'socio-materiality' mentioned above refrain from taking for granted the intranet as such, but allows us to study the ways in which it is brought about and mutually constituted through the work setting. Following this shift, it can be assumed that the technology investigated establishes a variety of relations in association with different

settings and practices. My research is in fact intended to give an account of the manifold ways in which the intranet is enacted across the organisation by way of looking at the practices it is part of.

'Praxiography' – a research strategy for socio-material practices

Mapping the entanglement of human and non-human actors and the practices they constitute involves intensive research on situated activities. But, as Lucy Suchman (2005) says, recognising the differences between different sites is not enough. 'If we start from the premise that objects are radically situated and correspondingly multiple, the question shifts from how to explain differences across sites to that of what holds 'an object' together in practice.' (Suchman 2005, 394). That is, acknowledging the multiple realities of objects is necessarily followed by an investigation into how something achieves its status of an object, under which circumstances and in relation to which conditions this takes place. Translated methodologically, this approach investigates artefacts, issues or other concerns by looking at the specific conditions and the practices through which they come into being.

This is in fact how Annemarie Mol (2002) describes her praxiographic research strategy. Studying the different settings in the hospital in which one particular disease, atherosclerosis, comes about, illustrates that through the microscope, atherosclerosis is something else than in the consulting room (Mol 2002, 30). From this perspective, a disease is not something given, but is done again and again with respect to the different settings in which it occurs. Subjects and objects are equally involved and assemble around different activities, in fact *practices*. This is why Mol refers to the idea of 'enactment' when describing the different versions of atherosclerosis;

> It is possible to say that in practice objects are *enacted*. This suggests that activities take place – but leave the actors vague. It also suggests that in the act, and only then and there something *is* – being enacted. […] Thus, an ethnographer/praxiographer out to investigate diseases never isolates these from the practices in which they are, what one may call, *enacted.* (2002, 32-3, italics original).

That is, the term 'to enact', highlights the practical circumstances under which a disease or any other object comes into being. This is done through a variety of instruments, techniques or other organisational routines that all participate in handling a disease, a topic or an object. It is apparent that for Mol, and also for Suchman (2005), something comes into being, or achieves reality, through the activities or, more appropriately, practices. This is why

Mol refers to her concept as moving 'from an epistemological to a prax-iographic inquiry into reality' where ontology is not simply given but located and constantly re-accomplished in practices (2002, 32).[11]

The ethnography of practices delivers the methodological pro-gramme for Wanda Orlikowski's (2007, 2010) examination of socio-material practices. However, the concept of 'praxiography' adds certain corrections to a common ethno-graphic research perspective. The basic idea of 'culture', existent as an all-encompassing system imposing certain perceptions and activities on people, is given up in favour of a micro-investigation of practices (Mol 2002, 77 and 176). Moreover, Mol ar-gues that we should not investigate what people think, but how they *experience* their disease, how it hap-pens and takes shape in their life. The practical implications of a par-ticular socio-material configuration, how it forms working practices and in doing so interacts with a variety of other activities in the organisation, is now under examination. In other words, the researchers observe not only people and their sense-making capacities, but the *events* through which an object comes about (cf. Mol 2002, 7 et seqq.). In addition, from a praxiographic point of view, the knowledge embedded in prac-tices is not inaccessibly located in a subject, but can be studied via the examination of practices (Mol 2002, 102 et seq., see also Law 2004, 59-

60).

The vocabulary Mol employs to describe the practice-arrangements across different sites is very much context-dependent, so that one needs to appropriate it for other research settings. Yet, the general idea and conception of socio-mate-rial practices arranging one another, remains. Through the way the prax-iographic inquiry turns the analysis towards the materiality of practices, it becomes possible to study how a specific online environment, that of the intranet, achieves reality across different working settings. As it will be shown, this move requires trac-ing the practices through which the intranet comes into being. Moreover, this prompts us to ask how these dif-ferent arrangements relate and co-ordinate one another.[12]

Researching the intranet as a 'so-cio-material assemblage'

Within the context of my own research project on intranets in or-ganizations, the theoretical and the methodological framework require the research design to focus on the different departments within these organizations and on their distinct working settings in order to inves-tigate the multiple, dynamic and changing ways in which the intranet comes into being in a variety of situ-ations. Methodologically, this is ob-tained through participant observa-tion and interviewing as well as a form of document analysis adapted to software.

Observing how the intranet is part of different work practices constitutes a necessary analytical move that makes visible what may seem obvious at first glance; practice theory unveils, in an ethnomethodological fashion, the (perhaps) taken for granted, in order to explain how organisational life proceeds through a device such as the intranet. Davide Nicolini terms this move a 'zooming in' on the relevant doings and sayings that guide a specific practice (2009, 1400; see also Schmidt 2008, 284). From this perspective, a simple activity, such as a telephone call, appears to be a skilful accomplishment involving specific competences and understandings. For my research on the intranet, this perspective entails examining the doings and sayings performed when people sit in front of their screen, working while using and relating to the intranet. The analytical move in this case is to highlight the activities involved in enacting, or doing 'the intranet'; bodily movements as well as the contribution of materialities (for example, the keyboard and the screen) are both significant in order to understand what is happening when the intranet is applied (cf. Schmidt 2008, 290-1). As it can be seen, this praxiographic inquiry focuses on the activities in a particular setting, so as to unravel the situated and local accomplishment underpinning the handling of intranet software. This analytical shift makes apparent what stays otherwise implicit or unknown. Only then one is able comprehend what kind of work is involved in the specific doing of a practice.

In addition to observation, interviews are conducted in order to find out about the practicalities involved in 'doing the intranet'. I am interested in the events occurring around the implementation of the intranet. As stated, the notion of 'event' is used to foreground the activities in which the intranet is part, since only through an exploration of the practical circumstances am I able to understand the practice itself (Mol 2002, 13-20). In the case of the intranet, this means to investigate how and when people are able to use it to accomplish their work, and in which situation it does not make sense at all. Or, under what circumstances the intranet makes work easier or more complicated. In fact, interviews are not used to 'access values, beliefs, or presumed inner motives which supposedly guide the conduct of the practitioners' but to unveil the practical concerns guiding the practice (Nicolini 2009, 1404). These are, in fact, features of the practice, not of the people involved and serve as a guiding principle directing the practice (cf. Schatzki 2005: 480). They have to be discerned from what is said in the interview and are only apparent in the routinely ongoing of the practice. To sum up, the praxiographic research perspective does not assume an 'untouchable', hidden meaning or understanding

behind people's activities. What is apparent on the surface is in fact reality, configured through practices.

Altogether, practice-informed observation and interviewing assist in the unravelling of the practice(s) in which the intranet is enacted. However, this is only one part of a praxiographic inquiry; practices do not only transpire through local activities, but must be seen as connecting to other incidents, since one practice constitutes a resource for another (Nicolini 2009, 1406). In fact, practices affect, change and coordinate each other (cf. Mol 2002, 53 et seq.). This second analytical move is what Nicolini (2009, 1407) calls 'zooming out' of practices; it means, in the case of intranets, we need to look at the way they shape and direct other practices in the company, for example other internal and external communication patterns. [13] Accordingly ,my research investigates how the intranet shapes and directs the overall communication in the company in association with other information exchanges such as meetings or informal gatherings.

This praxiographic inquiry anticipates analytically an arrangement of practices that may be investigated. From this perspective, practices are seen as assemblages that form tight or rather loose connections (cf. Deleuze and Guattari 1987). The notion of assemblage informs my research approach; first of all, it directs my attention to the specific doings and sayings through which practices transpire. Secondly, it refers to the level of other practices where the intranet becomes part of a broader configuration outside of the organizational settings. Indeed, the notion of assemblage underlines that practices never occur alone; they proceed through specific doings and sayings, but at the same time they are part of a larger arrangement of practices. This notion indicates the simultaneous development of practices on small and large scales. Overall, it emphasises the emergent and creative becoming of an object (see also Venn, 2006; Marcus and Saka, 2006).

The case study – preliminary results

Finding a company where I can do my fieldwork turned out to be a critical issue because of the specific situation of organisations and in particular of intranet software. Indeed, the process of getting access to organisations is demanding since they suspect their internal operations are made public and may be at risk if someone from outside takes part in their day to day businesses (van der Waal 2009, 27-8). In addition, intranets are dedicated as the centrepiece of organisations, secured by firewalls and accessible only from inside the organisation. This is why intranets are studied infrequently (Lehmuskallio 2006, 290-1). However, a practice-informed ethnography foregrounds informal data gathering that is investigated

only through an extended participation in the field. Hence, access and a trustful relation with the company are of vital importance. In my case, the initial contact was made through a colleague's friend, working in the middle management. From there I worked myself into the company, over time I established a network of contacts in different departments, either working with or on the Intranet (i.e. the chief editor and the project manager of the Intranet).

The company with which I now do my research works in the telecommunication industry and is one of the largest in the country[14]. I started my fieldwork during a time when the two major branches of the company, the mobile and the landline branches, were merged. In the course of this development, a new intranet has been launched to unite the formerly distinct organisations and, in particular, to improve the overall information and communication exchange in the company. In line with the theoretical and methodological considerations outlined here, as well as taking into account the present situation of the company, my research asks the following questions: (1) how is the intranet enacted within a variety of work practices in different settings of the organisation? (2) Do the practices that bring about the intranet as a specific tool support the general information and communication exchange among employees? (3) Do these enactments contribute to

an overall 'togetherness' within the company?[15] Formulated as such, my research examines what an intranet is able to accomplish under the given circumstances. Moreover, it is intended to contribute to future design and implementation of intranet software, since the mapping of practice-arrangements investigates which applications function in particular workplace infrastructures and which properties are overlooked or rejected.[16]

Generally, research on intranet software has pointed out an immense gap between the discourse on intranets and the way these intranets are actually practiced (Pellegrino 2003b). That is, literature on collaboration software presents the intranet as a straightforward tool that can easily be employed in order to introduce changes in communicative customs or to facilitate the exchange of ideas and motivations despite people's dispersed working settings (Collins 2001, see also Pellegrino 2003b). This, in fact, stands in contrast to empirical studies on intranet usages, showing that employees experience this tool as less simple and, in fact, demanding, since it interferes with regular working processes. Therefore, certain applications are often disregarded or people tend to develop their own usages and in doing so undermine intended strategic considerations (see Pellegrino 2003a; Stenmark 2006; Callaghan 2002, 80-1). These findings correspond to the overall

situation of intranets: they are intended for the whole organisation and therefore have to function in a variety of work settings, but at the same time research on technologies and intranets has shown that software only makes sense if it mirrors adequately different working infrastructures (Suchman et. al. 1999; Stenmark 2005). This tension has to be considered each time an intranet is implemented in a company. Accordingly, research on intranet software is essential; I value the practice-based perspective, since through the mapping of practices, one is able to give an (qualitative) insight into how and under which circumstances the intranet functions successfully, and where it fails to do so.

But researching the intranet as a *socio-material assemblage* (cf. Suchman 2007, 268) faces several challenges, which I will discuss next. Foregrounding the relations that bring the intranet about as an object, indicates that one is not able to designate beforehand which practices are of importance for the investigation. Rather, Mol's conception of praxiography suggests that one should be careful in making too many assumptions in advance. Instead, a reflexive account on one's own research approach is favoured. Moreover, practice-based research moves between focusing on certain practices while leaving others aside; in so doing it tries to acknowledge the complexity of the investigated research setting. However, at the same time, the researcher has to decide which practices to focus on, so as not to get lost in the variety of practices one is confronted with. Therefore, a constant analysis and discussion of fieldnotes accompanying the actual fieldwork is vital.

Another challenge I recognise concerns the methods involved. As noted above, interviews are utilised in order to investigate the practicalities implicated in a particular practice, rather than specific intentions or motives of people. This move entails an analytical abstraction from what is stated in the interview, in order to be able to say something about the practice. Again, it implies a reflexive account in response to what one is actually investigating and the need to develop a clear understanding of the studied practice-arrangement. This is only achieved through an extended participation in the field, which brings me to the last challenge I want to point out. Different research settings also offer distinct possibilities for participation, and particularly in the case of organisations, access and an extended period of fieldwork is not easily obtained. However, the practice-based research presupposes diving into local circumstances, so as to gain an understanding of the situated activities organising a practice. It challenges, in fact, the researcher's individual ability to establish an ongoing and trustful relationship with the company.

Conclusion

The research approach presented here constitutes a valuable resource for a variety of research settings studying the dissemination of software applications in contemporary societies. It questions an understanding of software that treats it as a virtual, i.e. hidden force behind the computer screen. Beyond an ethnographic understanding, it foregrounds the materiality of software by referring to the practices, i.e. doings and sayings, of which the software is part. From this point of view, an artefact is not just a given but first of all constituted through its relations, i.e. through the activities or practices it is part of and which it is likewise carrying. It is therefore of particular value in the case of software since the focus on materiality considers the software and its entanglement with different (organisational) settings.

I have illustrated the methodological implications stemming from this framework by presenting a praxiographic research strategy that investigates the different sites in which the software achieves a certain reality in relation to the socio-material practices it is entangled with. Yet, this research approach faces several methodological challenges that are worth exploring so as to design an appropriate research setting. The praxiographic analysis presupposes access to the sites and situations in which the practices of interest occur. This approach can be relevant to various research settings, helping researchers understand what a software does, how it affiliates with people's communication online and offline, and while doing so, configures our everyday life.

Endnotes

[1] Helen Kennedy's text on Internet identity research confirms Miller and Slater's findings; in fact, when researching people's 'virtual' identities on the Internet she points out that research has 'to look at online contexts of offline selves, in order to comprehend virtual life fully.' (2006, 861). With that said, she revises to some extent the work done by Sherry Turkle (1995).

[2] The concept of 'virtual ethnography' attends to the different space-time formations software applications offer and joins the understanding that the Internet must not be seen as a social sphere separated from everyday life. See Hine (2000).

[3] A similar argument has been made by Adrian Mackenzie in his book Cutting Code (2006), where he refers to the same authors (Castells, Rheingold and research by Miller and Slater). Apparently, these authors illustrate well the discourse existent during the 1990s, and the challenge of this attitude at the beginning of the 2000s.

[4] See http://lab.softwarestudies.com/ (accessed on February 17, 2011).

[5] For an illuminating insight into the aesthetic of computer and software, see Goriunova and Shulgin (2008).

6 As it can be seen, the term 'usage' is now one amongst others. As it will be shown, the practice theoretic perspective I propose here moves away from centring the human in order to look at the practices in which the intranet is part of. This is why I later turn to the notion of 'assemblage' emphasising the creative effects when different elements associate with each other.

7 Feldman and Orlikowski refer to research on knowledge and learning that especially in organisation studies is well explored from the perspective of practice theory (Wenger 1998, see also Brown and Duguid 2001). Recently, research on power issues, so far rather excluded, experiences a growing attention (Contu and Willmott 2003, Weizmann 2011).

8 One may think of other differentiations, taking into account the different backgrounds of practice theory and especially Actor-Network Theory. However, this undertaking would go beyond the scope of this article, which is why I opted for the rather pragmatic categorisation that Feldman and Orlikowski (2011) provide: it gives me the possibility to position the perspective my article seeks to bring forward.

9 The idea of moving from an implicit to an explicit theorisation has, in fact, been picked up by researchers within different sub-areas in the social sciences, such as media studies. As Nick Couldry points out, an advantage of a practice theoretic perspective for media research is the fact that it turns away from simply reading media as text and refrains from drawing on given categories such as consumption or audience so as to embed it in the activities which first of all bring different media settings about (Couldry 2004, 117 and 125). It follows that the concept of practices, chosen 'not out of ethnographic habit', as John Postill self-critically remarks, (2010, 16) but deliberately conceptualised, provides a framework for media research that leaves space to an empirical investigation of activities, or better practices, and explains how different media and their production are first of all brought about.

10 See Reckwitz (2002) for a revealing discussion of materiality in social and cultural theory.

11 As already mentioned above, Mol's praxiographic understanding does two things at once that turn her approach into a philosophical inspired engagement. Firstly, her study on medical knowledge via the focus on practices rejects the existence of solid and stable objects. That is, one does not ask in a Kantian fashion 'how am I able to approach reality?' but acknowledges that via practices, reality is constantly achieved anew. Secondly, the idea of a universal knowledge is similarly given up, the question 'what am I able to know?' changes into an (ethnographic) investigation of how knowledge emerges through practice-arrangements (Mol 2002, 5). Being is now located in practices. Thus, a discussion about truth and the right or wrong representation of objects and subjects can be left aside, a topic quite extensively debated in the social sciences with respect to relevant research methods. But Mol's understanding oversteps this subject-object divide and instead, shows that a reflective discussion of one's own research approach is favoured. How-

ever, my analysis of Mol's praxiography takes place in the context of a theoretical and methodological framework for research on information technologies; for this reason, I do not consider in detail her philosophical move at this point, but focus on her concept's practical applicability for empirical research.

[12] Mol's praxiography stems from a close engagement with Actor-Network-Theory (ANT) that treats materiality as inherent to - and constitutive of - the social. However, it differs in the way the notion of practice – instead of network, or association – is conceptualised, even though the two concepts correspond to each other, for instance in the way they provide a descriptive vocabulary and abstain from preconceived definitions and categories. See Mol on ANT/Latour (2002, 30 et seqq. and 61 et seqq.) as well Latour (2007) and Law (2007).

[13] Nicolini shows that the aspect of 'zooming out' might even be extended outside of the organisation, for example by comparing contemporary work practices across different organisations. As it can be seen, from a praxeological perspective, a distinction between micro and macro level is negligible, since larger phenomena are recognized as the result of local practices (Nicolini 2009, 1394-5, see also Mol 2002, 179 and Latour 2007,169 and 219). [14] The country is kept anonymous here for ethical reasons.

[15] Strictly speaking, the second and third research questions are not genuine practice theoretic, but inspired by practice theory. They are phrased as such in order to consider the current situation of the company in the analysis.

[16] I want to underline again that the actual fieldwork of my project is still ongoing; therefore, I am unable to present at this stage an analysis on the different work practices bringing about the intranet but discuss the overall theoretical/methodological framework of my work.

References

Barley, S. 1986. 'Technology as an Occasion for Structuring: Evidence from Observation of CT Scanners and the Social Order of Radiology Departments'. In *Administrative Science Quarterly* 31: 78-108.

Bourdieu, P. 1976. *Entwurf einer Theorie der Praxis auf der ethnologischen Grundlage der kabylischen Gesellschaft.* Frankfurt am Main: Suhrkamp.

Brown, J.S. and Duguid, P. 2001. 'Knowledge and Organization: A Social-Practice Perspective'. In *Organization Science* 12(2): 198-213.

Bühl, A. 1996. *CyberSociety*. Köln: PapyRossa.

Callaghan, J. 2002. *Inside Intranet and Extranets: Knowledge Management and the Struggle for Power.* London: Palgrave.

Castells, M. 2000. *The Rise of the Network Society – The Information Age: Economy, Society and Culture, Vol 1.* Oxford; Malden, Massachusetts: Blackwell.

Clash, J. I., Eccles, R. G., Nohria, N. and Nolan, R. L. 1994. Building

the Information-Age Orga*nization: Structure, Control and Information Technologies.* Chicago: Irwin.

Collins, H. 2001. *Corporate Portals: Revolutionizing Information Access to Increase Productivity and Drive the Bottom Line.* New York: Amacom.

Contu, A. and Willmott, H. 2003. 'Re-embedding Situatedness: The Importance of Power Relations in Learning Theory'. In *Organization Science* 14(3): 283-296.

Couldry, N. 2004. 'Theorising Media as Practice'. In *Social Semiotics* 14 (2): 115-132.

Deleuze, G. and Guattari, F. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia.* London: Continuum.

Feldman, M.S. and Orlikowski, W. 2011. 'Theorizing Practice and Practicing Theory'. In *Organization Science*, forthcoming.

Fuller, M. 2008. 'Introduction'. In *Software Studies. A Lexicon.* ed. M. Fuller. Cambridge, Massachusetts: MIT Press, pp 1-13.

Garfinkel, H. 1967. *Studies in Ethnomethodology.* Englewood Cliffs, NJ: Prentice Hall.

Giddens, A. 1984. *The Constitution of Society.* Berkley, California: UP.

Goriunova, I. and Shulgin, A. 2008. 'Glitch'. In *Software Studies. A Lexicon*, ed. M. Fuller. Cambridge,

Massachusetts: MIT Press, pp 110-119.

Harris, J. 2005. 'The Ordering of Things: Organization in Bruno Latour'. In *The Sociological Review* 53: 163–177.

Heizmann, H. 2011. 'Knowledge Sharing in a Dispersed Network of HR Practice: Zooming in on Power/Knowledge Struggles'. In *Management Learning* 42(4): 379-393.

Hine, C. 2000. *Virtual Ethnography.* London: Sage.

Kennedy, H. 2006. 'Beyond Anonymity, or Future Directions for Internet Identity Research'. In *New Media and Society* 8: 859-876.

Latour, B. 1993. *We Have Never been Modern.* Cambridge, Massachusetts: UP.

Latour, B. 2007. *Reassembling the Social.* Oxford: UP.

Law, J. 2004. After Method: Mess in Social Science Research. London and New York: Routledge.

Law, J. 2007. 'Actor Network Theory and Material Semiotics,' version of 25th April 2007, available at http://www.heterogeneities.net/publications/Law2007ANTandMaterialSemiotics.pdf (accessed May 15, 2010).

Lehmuskallio, S. 2006. 'The Uses, Roles, and Contents of Intranets in Multinational Companies in Finland'. In Journal of Business and

Technical Communication 20(3): 288-324.

Luke, T.W. 1999. 'Simulated Sovereignty, Telematic Territoriality: The Political Economy of Cyberspace'. In *Spaces of Culture: City-Nation-World*, eds. M. Featherstone and S. Lash. London: Sage, pp 27-48.

Lynch, M. 2001. 'Ethnomethodology and the Logic of Practice'. In *The Practice Turn in Contemporary Theory*, eds. T.R. Schatzki, K. Knorr-Cetina and E. von Savigny. London and New York: Routledge, pp 131-148.

Machin, D. 2002. *Ethnographic Research for Media Studies.* London: Arnold.

Mackenzie, A. 2006. *Cutting Code – Software and Sociality*. New York: Peter Lang.

Marcus, G.E. and Saka, E. 2006. 'Assemblage'. In *Theory, Culture and Society* 23(2-3): 101-6.

Marres, N. 2004. 'Reality is…', available at http://www.easst.net/review/june2004/marres.shtml (accessed February 15, 2010).

Miller, D. and Slater, D. 2000. *The Internet: An Ethnographic Approach*. Oxford: Berg.

Mol, A. 2002. The Body Multiple: Ontology in Medical Practice. London: Duke.

Nicolini, D. 2009. 'Zooming In and Out: Studying Practices by Switching Theoretical Lenses and Trailing Connections'. In *Organization Studies* 30(12): 1391-1418.

Orlikowski, W. 2007. 'Sociomaterial Practices: Exploring Technology at Work'. In *Organization Studies* 28(9): 1435-1448.

Orlikowski, W. 2010. 'The Sociomateriality of Organizational Life: Considering Technology in Management Research'. In *Cambridge Journal of Economics* 34: 125-141.

Pellegrino, G. 2003a. 'Representations and Uses of the Intranet: A Comparative Case Study'. In Bulletin of *Science, Technology & Society* 23:281-296.

Pellegrino, G. 2003b. 'Calling Technology: Discourses On/Of the Intranet in a Comparative Case-Study', available at http://www.mngt.waikato.ac.nz/ejrot/cmsconference/2003/proceedings/technology/Pellegrino.pdf (accessed June 9, 2011).

Postill, J. 2010. 'Introduction: Theorising Media and Practice'. In *Theorising Media and Practice*, eds. B. Bräuchler and J. Postill. Oxford and New York: Berghahn, pp 1-32.

Reckwitz, A. 2002. 'The Status of the "Material" in Theories of Culture: From "Social Structure" to "Artefacts"'. In *Journal for the Theory of Social Behaviour* 32(2): 195-217.

Reckwitz, A. 2003. 'Grundelemente einer Theorie sozialer Praktiken

– Eine sozialtheoretische Perspektive'. In *Zeitschrift für Soziologie* 4: 282-301.

Rheingold, H. 1992. *Virtual Reality*. London: Mandarin.

Schatzki, T.R. 1996. *Social Practices – A Wittgensteinian Approach to Human Activity and the Social*. Cambridge: UP.

Schatzki, T.R 2002. *The Site of the Social*. Pennsylvania: UP.

Schatzki, T.R. 2005. 'Peripheral Vision: The Sites of Organizations. In *Organization Studies* 26: 465-486.

Schmidt, R. 2008. 'Practices of Programming. Towards a Morphology of Knowledge Work in Software Development'. In *Zeitschrift für Soziologie* 37(4): 282-300.

Stenmark, D. 2005. 'How Intranets Differ From The Web: Organisational Culture's Effect on Technology', available at http://www.viktoria.se/~dixi/publ/ecis_80.pdf (accessed March 12, 2009).

Stenmark, D. 2006. 'Corporate Intranet Failures: Interpreting a Case Study through the Lens of Formative Context'. In *International Journal of Business Environment* 1(1): 112-125.

Suchman, L., Blomberg, J., Orr, J.E. and Trigg, R. 1999. 'Reconstructing Technologies as Social Practice'. In *American Behavioral Scientist* 43:392-408.

Suchman, L. 2005. 'Affiliative Objects'. In *Organization* 12: 379-399.

Suchman, L. 2007. *Plans and Situated Action: Human-Machine Reconfigurations*. Cambridge: UP.

Turkle, S. 1995. *Life on the Screen – Identity in the Age of the Internet.* New York: Simon & Schuster.

Van der Waal, K. (2009) 'Getting Going: Organizing Ethnographic Fieldwork'. In *Organizational Ethnography: Studying the Complexities of Everyday Life*, eds. S. Ybema, D. Yanow, H. Wels and F. Kamsteeg. London: Sage, pp. 23-39.

Wajcman, J. 2006. 'New Connections: Social Studies of Science and Technology and Studies of Work'. In *Work, Employment and Society* 20(4): 773-786.

Weick, K.E. 1993. 'The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster'. In *Administrative Science Quarterly* 38: 628-652.

Wenger, E. 1998. *Communities of Practice: Learning, Meaning and Identity.* Cambridge: University Press.

Venn, C. 2006. 'A Note on Assemblage'. In *Theory, Culture and Society* 23: 107-8.

Research Note:
Sounds of silence:
Using online spaces to connect citizens and experts

Maud Radstake and Peter Scholten

This essay presents an account of the particular experiences with using online spaces for connecting citizens and experts by two scholars who were amateurs in online interaction. The set-up of an online platform for public participation in river management, and an online discussion between citizens and experts in medical genomics research serve to reflect on some general assumptions about participation and the internet. Three conclusions are drawn. First, the implicit assumption that going online would enable the involvement of 'the silent majority' was not confirmed. Second, the role of experts presented an additional challenge to public engagement. Third, experiments with online communication between citizens and experts require more knowledge about virtual environments and online social networks by researchers and others who set up such experiments. The account calls for awareness among experts in online communication about perhaps unexpected needs for their expertise, and encourages translation and collaboration.

Keywords: public participation, online dialogue, expert engagement

Introduction

It was not long after its public explosion in the nineties that the internet was discovered as an environment and tool to engage citizens with politics and policy-making (Carpini et al. 2004, 334 ff.; White 1997). Meanwhile, online discussions and consultations have become part and parcel of tool boxes in use to connect citizens, consumers or users with experts, and engaging them in decision-making in all kinds of areas (see e.g. Andersson & Casey 2007, Dahlgren 2005, Macintosh & Whyte 2008). More democratic decision-making, legitimization of certain decisions or learning from a larger va-

riety of societal expertise: there are various reasons to engage publics in decision-making processes (cf. Fiorino 1989; Stirling 2008).[1] Like many others, public engagement professionals have come to cherish an image of the World Wide Web as accessible, transparent and democratic (cf. Poster 2001). Web-based participation, for instance, promises to complement real-life participation exercises. Its flexibility and accessibility could allow for the participation of people who are hard to reach, by off-line means of engagement. Online, one could reach beyond the realm of directly involved stakeholders and interest groups who are the 'usual suspects' in participatory exercises.

Such promises about the internet not only gave rise to a body of new academic and professional practices in the field of online participation, but also appealed to many other professionals, scholars and scientists. In this discussion paper, we present the particular experiences with using online spaces for connecting citizens and experts by two of such amateurs - ourselves. One concerns the set-up of an online platform as part of an interdisciplinary project on participatory river management. The second experience is taken from an interactive communication programme, including online discussions between citizens and experts in genomics.[2] Despite their differences, the two projects were alike in their assumption that

going online would contribute to the involvement of 'unusual suspects' in the interactions with experts in policy or techno-science. This group is often referred to as the 'silent majority' (Lezaun and Soneryd, 2007, 280). In the river management project, a space for online discussion was created with the aim to involve more citizens in the production of a knowledge base for decision-making. That process had so far been limited to real-life interactions among directly involved stakeholders and experts. In the other project, genomics experts were introduced to existing discussion boards frequented by potentially interested citizens who were not expected to regularly engage in interactions with scientists. An underlying assumption of both projects was that an online environment would allow the organizers to engage more and other participants in the desired interactions than they would be able to reach in real life. We employed a broad notion of 'participation' as interaction between citizens and decision-makers in policy or science.

It is important to note that what we present are not professionally designed exercises in participatory policy-making, and even less in online participation. Neither of the projects were setup and organized according to a fixed design or method. Trained as cultural anthropologists and working in a science faculty, our principals merely wanted to do 'something participatory online' as

a side-track to our research and communication projects at the time. Without any professional experience in either the organization of participatory processes or online interactions, we just started doing it. Our position was presumably not unlike that of many professionals in policy or research today. That is why we present it here: to invite colleagues who are experts in online interaction and participation to relate their expertise to the experiences of those who may be in need of it.

The lessons that we draw from our experiences do not concern specific methods, tools or approaches in either offline or online participatory policy-making or public engagement. We use our experiences as amateurs in the organization of online interactions to reflect on some common assumptions about participation and the internet among scientists and policy-makers interested in public participation.

First, we experienced that in online participation one encounters the same 'problem' as in many of its real-life forms: those who populate online spaces and discussions are often people who have an interest or stake in the issue under discussion whereas the 'silent majority' is not engaged. Second, we learned that the role of decision-makers and experts in online discussion spaces is not at all self-evident and can be problematic. Our online experiences made us realize that engagement exercises are usually focused on the question how to reach the public, while the question how to engage policy and science experts and decision-makers remains rather unexplored in research in this area. And finally, we have learned that the internet is not a tool, but an environment. For the sensible realization of its potential to connect citizens and experts, we should learn from the explorations and experiments by social scientists in virtual environments and online social networks.

WaalWeelde: an online platform as part of a new approach in river management

In the project WaalWeelde local riparian governments have taken a new approach to river management. As a result of expected higher discharge volumes due to climate change, the Dutch river management paradigm has changed from the traditional confinement of rivers between constantly raised and strengthened dykes, to 'room for rivers' giving rivers more space to drain excess waters (Van Stokkom et al., 2005; Wiering and Arts, 2006). The new approach involves a broad range of options, including economic drivers to alleviate government budget constraints, such as (flood-adapted) housing along (possibly relocated) dykes.

The initial design of Waalweelde has been strongly focused on participatory decision-making strategies. Besides direct stakeholders, the project aimed to incorporate the

wider public in the riparian communities in the process. In order to facilitate the intended process of broad participation, an interactive website was created. Based on the assumption that often only a small segment of the general public is willing to invest time and energy in participative decision-making, the website was set up as an easily accessible and quick to use medium which would also invite the 'silent majority' to get involved in the process. The site offered a platform for proposing plans and ideas, discussing proposals and gathering information. People who were not interested in discussion got the opportunity to express support for a certain proposal by voting in the several polls that were available on the site.

Sixteen months after the site was launched, its results were disappointing. Out of 78 registered participants, 47 had actually posted a message on the forum. Of these 47 posts, 37 were made by members of the participating riparian administrations (government officials or civil servants), or people working on the WaalWeelde project. Four messages were posted by well-known experts on water management issues in the region. The remaining six messages were either announcements of local water-related activities - such as an initiative to display art in the riverbed - or plans for individual enterprises in water recreation.

The 37 posts coming from the riparian administrations received marginal or no visible attention from the broader public. Even the most controversial plans such as the renewal and expansion of an industrial area in the river bed (no reactions), or the plans for the construction of water-adapted houses in a flood-plain (a maximum of 5 written reactions and 3 votes in a poll), evoked no significant reaction or discussion on the website. Yet both cases have resulted in the establishment of local pressure groups that apparently used other ways to ventilate their viewpoints. At the same time the majority of the public that were targeted, remained silent.

The interactive website experiment was expected to bypass the problems of minority groups frustrating the decision-making process by creating a more representative image of different opinions through the consultation of the silent majority. Nevertheless, the initiative received little or no support from the local decision-makers participating in the project. The frequently heard explanation for this was a lack of administrative capacity and budget to perform the task of promoting the website and mobilizing the larger public. The internet experiment was initiated by the WaalWeelde project team, assuming that the local governments would promote the project in their own communities.

Lack of money might not be the only explanation. Through a combination of participant observation

and interviews with local decision-makers we learned about another reason. They explained that they were strongly occupied with defining their role in the newly established structures of cooperation in both inter-municipal and public-private arrangements. Having the public involved in such an early stage of the process was considered too much of a burden. It was feared that a public forum like the online experiment would be hijacked by minority groups and individual stakeholders campaigning for their personal agendas.

In retrospect we can conclude that the efforts in the WaalWeelde experiment were solely focused on involving the larger public whereas the question of how to involve the decision-makers in a two way interaction between experts and larger publics remained a blind spot. These results can be related to our experiences in a second experiment with online public participation. Comparable to the first case, the second experiment highlights the role of decision-makers in the instigation, modeling and practical implementation of public participation through the internet.

The DNA Dialogues: online public discussions with citizens and genomics experts

The DNA Dialogues was a research and communication project initiated by the Centre for Society and Genomics (CSG).[3] The project aimed to improve interaction between the general public, scientists and policy makers on current developments and applications in the life sciences commonly referred to as 'genomics'. The DNA-Dialogues included real life and online meetings between those (potentially) affected by genomics (i.e. publics rather than the general public) and those who make decisions regarding genomics knowledge and applications (i.e. scientists, policy makers and professionals in medical, agricultural, industrial or other practices). Such meetings were hosted by representatives of various publics, e.g. patient organizations, media or women's groups. The CSG stimulated and facilitated the organization of such discussions and acted as a moderator.

One of the activities organized as part of The DNA-Dialogues was an online discussion on the forum of the website Ouders Online[4] (Parents Online).[5] In April 2007, Ouders Online published an editorial article titled "What should happen to the heel prick blood?" in their online magazine, written by a staff member of the Centre for Society and Genomics.[6] She had attended a policy workshop, where scientists and policy-makers in the field of public health had discussed the possibilities for extending the use and storage of the blood obtained in the neonatal screening program for scientific research. The participants

largely agreed upon the scientific benefits of extending the time limits for storage and the need to reconsider the rules for storage and use of the blood for research, which such an extension would imply. Since media commotion in 2000, the policy of anonymous storage in the Netherlands has been changed into one of informed consent and limited (anonymous) storage for five years.[7] Yet another change in the rules and practices might meet societal resistance. Public education and engagement was considered as one of the ways to anticipate and prevent such resistance by involving the general public who have largely remained silent. When the CSG staff member proposed to find out whether Ouders Online would be interested in hosting an online discussion on the topic, several workshop participants supported that idea.

A initial article in the online magazine discussed the present practice and recent history of storage and use of the collected blood for scientific research, and explained why many scientists are in favor of extending the possibilities for using blood and additional data. The article not merely presented, but also questioned the issues at hand and invited readers to voice their opinions on the topic, including the necessity of information, views on storage and anonymity, children's role in giving consent, and the role of government, medical professionals and patient organizations in dealing with such issues.

Following a message posted by the editor of Ouders Online, mentioning the involvement of the CSG and the intended participation of scientists, a discussion ran on the message board for about two weeks and evoked relatively little response. 16 people participated, among who were 13 parents (all female) and 3 experts invited by the CSG (a leading scientist in the field of community genetics, a member of a NGO on biopolitics, and the CSG moderator herself). In sum 45 messages were posted. Initially the article and questions evoked diverse reactions: some people did not see any problem whatsoever, others emphasized the importance of complete and timely information, whereas others fiercely opposed because they feared damage to privacy, especially in relation to commercial and political interests.

Of the scientists and policy makers who had expressed their interest to participate in the discussion, only one eventually did. The expert's strategic considerations, observations and interpretations of the process were discussed in several e-mail, phone and face-to-face interactions with the CSG moderator before, during and after the online discussion. Another scientist contacted the organiser sshortly after the discussion had ended, explaining why he had not participated. He had been disappointed: rather than the young parents with seri-

ous questions that he had hoped to meet, the participants had turned out to present what he considered to be an abundance of misunderstandings, unreasonable frustrations and fears. What had happened?

The one participating scientist had entered the discussion, explaining to the other participants the scientific and societal urgency of longer storage and a change of policy. Among the responses was a message by the NGO representative, explaining risks for privacy and possible commercial interests behind the use of biomaterials. Then another parent joined the discussion. For frequent visitors of the Ouders Online message boards, she was a well-known contributor, who had widely expressed her concerns about privacy issues in relation to political and commercial stakes in many earlier discussions on Ouders Online (in relation to the information policy of schools, child welfare and health care and several other topics). When this parent doubted the scientific necessity of storing all data and raised suspicions about commercial interests, the scientist replied by explaining the scientific rationale behind extended storage and use. More parents presented rather critical responses, not so much about scientists, but about possible (mis-)use by others, including the government. The first critical parent stated that the scientist was stuck in her own 'frame of thinking' and called her to listen to what citizens have to say, rather than continue to repeat her own arguments. She also explicitly called the CSG to account, enquiring about their political agenda behind organizing this discussion. The CSG staff member responded by explaining the CSG's motives and ideas, stating that the CSG did not intend to act as advocate for science, yet to mediate dialogue among scientists and citizens in order for science to take societal concerns into account.

Discussion

Our amateur experiments with online discussions to engage the 'silent majority' in processes of dialogue and decision-making challenged notions of publics and experts that are fairly common in public engagement and participation literature and practice. From our experiences we draw three main conclusions, which will probably not surprise experts in online interaction and participation. However, in relation to the detailed accounts of our experiences and the considerations that informed them, we hope that they allow for the connection of a body of expertise that we have only begun to explore, to the needs of well-intentioned amateurs like we have been ourselves.[8]

First, going online did not make it any easier to meet 'the silent majority', let alone engage them. Both the discussion on a website especially made for the occasion, as well as the discussion about an article in an existing online space, attracted only

a limited number of people. The design of both interventions did not include a mechanism to ensure that participants were representative of a more general public. It was merely assumed that it was more likely to meet the general public online than in the real-life spaces where interactions with experts usually take place. The self-selected participants often were members of specific interest groups or had strong personal agendas.[9]

We could conclude that the general public simply were not interested in participating in the discussions we initiated. In that case, why would we insist on bothering them? However, we might also conclude that discussions about the issues at stake already take place among colleagues on the shop floor, in bars, in sports canteens, in classrooms and in various other public spaces, including the many virtual spaces inhabited by cybernauts and netizens.[10] Then the problem would be that experts do not recognize such discussions or consider them relevant. Whether the majority is perceived as silent might depend on where one keeps one's ear on the ground.

The second thing we learned was that the main issue for online interaction between publics and experts may not be how to involve citizens, but how to engage the experts. Our experiences showed that when their agendas were challenged, experts refrained from participation or with-

drew into their role as information providers. In the case of WaalWeelde, decision-makers were reluctant to stimulate and implement public participation on the website because the process of decision-making was still in a very early and exploratory stage, where clear policy goals and boundaries were not yet developed. Involvement of the public would make the process more complex and possibly difficult to manage. As a result the online experiment never really had a chance.

The Ouders Online discussion was situated in a somewhat unusual place for expert involvement. The online forum was familiar to the participating parents, but was a rather strange environment for scientists or policy makers in their expert role. They had supported the idea of using an existing discussion forum to involve not only the 'usual suspects' with personal stakes or interests, but also a wider audience of parents. However, they had not envisioned a discussion about their own agenda, and reacted by either not participating or by explaining their own position rather than responding to the concerns uttered by some of the parents. In order to make online involvement work, both citizens and experts need to engage in two-way communication. This requires frames, practices and tools for 'expert engagement' in addition to those of 'public engagement' that we are already familiar with in participatory processes

A third conclusion that we have drawn from our experiments is that we simply did not know enough about the patterns, places and specifics of online communication. Although websites, message boards, wikis, blogs or social media undoubtedly offer many possibilities to connect scientists and citizens in dialogue and decision-making, real-life problems in the engagement of non-usual suspects in participation cannot be circumvented by merely going online. We basically considered the internet as a tool, a space for the expansion of real-life activities. Yet to understand why and how people act online, we need expertise in social and cultural studies about online behavior and its connections to other spheres of life. Although we both were trained in ethnographic methods, we did not apply those in our exploration of a new world. For future efforts to connect citizens and experts, we hope to learn from colleagues who have made those connections in their studies of online environments.

Endnotes

[1] On the pluralization of 'the public' into 'publics', see e.g. Barnes et al. 2003 and Martin 2008. The notion of 'publics' reflects that citizens are affected by policy or technology in different ways and therefore cannot be addressed as a singular actor.

[2] Both examples are taken from projects in the Institute for Science, Innovation and Society (ISIS) at the Radboud University in Nijmegen, the Netherlands. ISIS hosts, amongst others, the Centre for the Sustainable Management of Resources (CSMR), the home of the online platform that we describe, and the Centre for Society and Genomics (CSG), the locus of our second experience.

[3] CSG is part of the Netherlands Genomics Initiative (NGI).

[4] Ouders Online is a Dutch online magazine and community on parenting with a discussion panel receiving 30,000 new posts a month (www.ouders.nl).

[5] This online discussion has also been described as one among other cases in two academic articles that have resulted from a social-scientific reflection on The DNA-Dialogues-project (Radstake et al. 2009a&b).

[6] This CSG staff member is one of the authors of this paper.

[7] Informed consent refers to an agreement to allow the blood obtained for neonatal screening to be stored and used for scientific research, made with complete knowledge of all relevant facts, such as the risks involved or any available alternatives.

[8] Including work that addresses methodological and other research issues in online participation and deliberation (e.g. Coleman & Blumler 2009; Rose & Oystein 2010), as well as literature on virtual ethnography (e.g. Hine 2000, 2005).

[9] The salience of distinguishing representative and self-selected participants

in public participatory events has also been addressed in academic literature on governance and participation (e.g. Fung 2006). The problem has also been addressed in the critical analyses of public political engagement by political scientists like Stoker (2006) and Hay (2007). At the time of our experiments, we did not question the general intuition that going online would enable the engagement of a more general public. Therefore we did not consider the exploration of methods for the involvement of non-usual suspects as have for instance been developed by professional organisations like America Speaks or ScienceWise in the UK.

[10] The term cybernaut or internaut is used to describe an habitual user of the internet (cf. Brill 1993). Netizen refers to a person who is actively involved in online communities (cf. Hauben & Hauben 1997).

References

Andersson, E. & A. Casey. 2007. Is engaging online a substitute or supplement for real life connection? eGov monitor – a policy dialogue platform.Retrieved from http://www.egovmonitor.com/node/15743, September 17 2008.

Brill, L. 1993. Metaphors for the traveling cybernaut (virtual reality). *Virtual Reality World*, 1(1) Q-S.

Carpini, M.X.D,, F.L Cook & L.R. Jacobs. 2004. Public deliberation, discursive participation, and citizen engagement: a review of the empirical literature. *Annual Review of Political Science* 7: 315-344.

Coleman, S. & J.G. Blumler 2009. *The Internet and Democratic Citizenship.* New York: Cambridge University Press.

Dahlgren, P. (2005). The Internet, Public Spheres, and Political Communication: Dispersion and Deliberation. *Political Communication*, 22(2) pp. 147-162.

Fiorino, D. 1989. Environmental risk and democratic process: A critical review. *Columbia Journal of Environmental Law* 14:501-47.

Fung, A. 2006. Varieties of participation in complex governance. *Public Administration Review*, December 2006: 66-75.

Hauben, M. & R. Hauben. 1997. *Netizens. On the history and impact of Usenet and the Internet.* Los Alamitos: Wiley-IEEE Computer Society Press.

Hay, C. 2007. *Why We Hate Politics.* Cambridge, UK: Polity Press.

Hine, C. 2000. *Virtual ethnography.* London, UK: Sage.

Hine, C. 2005. *Virtual Methods: Issues in Social Research on the Internet.* Oxford, UK: Berg.

Lezaun, J. & L. Soneryd. 2007. Consulting citizens: technologies of ilicitation and the mobility of publics. *Public understanding of science: an international journal of research in the public dimensions of science and technology* 16(3):

279-298.

Macintosh, A. and A. Whyte. 2008. Towards an evaluation framework for eParticipation. *Transforming Government: People, Process & Policy*, 2 (1). pp. 16-30.

Martin, G. P. 2008. "Ordinary people only": knowledge, representativeness, and the publics of public participation in healthcare. *Sociology of Health & Illness* 30(1): 35-54.

Poster, M. 2001. *What's the matter with the Internet?* Minneapolis: University of Minnesota Press.

Radstake, M., E. v.d. Heuvel-Vromans, N. Jeucken, K. Dortmans & A. Nelis. 2009a. Societal dialogue needs more than public engagement. EMBO Reports 10 (4): 313-317.

Radstake, M., A. Nelis, E. v.d. Heuvel-Vromans & K. Dortmans. 2009b. Mediating online DNA-Dialogues. From public engagement to interventionist research. *Science, Technology & Innovation Studies* 5: 37-47.

Rose, J. and S. Oystein. 2010. Designing Deliberation Systems. *The Information Society,* 26 (3): 228-240.

Stirling, A. 2008. "Opening Up" and "Closing Down": Power, Participation, and Pluralism in the Social Appraisal of Technology. Science, *Technology & Human Values* 33(2): 262-294.

Stoker, G. 2006. *Why Politics Matters: Making Democracy Work.* Houndmills, UK: Palgrave Macmillan.

White, C.S. 1997. Citizen participation and the internet: prospects for civic deliberation in the information age. *The Social Studies* 88 (1): 23-28.

Wiering, M.A.and B.J.M. Arts. 2006. Discursive shifts in Dutch river management: 'deep' institutional change or adaptation strategy? *Hydrobiologia*, 317-325

Van Stokkom, H.T.C., A.J.M. Smits en R.S.E.W. Leuven. 2005. Flood defense in the Netherlands: A new era, a new approach. *Water International* 30, 76-87.

Nicholas Jensen, *University of Cardiff*

Tom Boellstorff. 2008. *Coming of Age in Second Life: An Anthropologist Explores the Virtually Human.* New Jersey: Princeton University Press. 336pp.

Coming of Age is written by Tom Boellstorff, Professor of Anthropology at the University of California, Irvine. He is the author of a *Coincidence of Desires: Anthropology and Queer Studies* (Princeton University Press). The subject matter details key considerations regarding the application of traditional ethnographic practices to virtual environments, with specific focus on the virtual realm and 'post-humanism'. Ordered in three sections the book covers a diverse range of topics including: Setting the Virtual Stage, Culture in a Virtual World and The Age of Techne. There are nine chapters spanning the three sections covering varied technological, sociological and philosophical topics, such as, place and time, personhood, community, and political economy. Scholarly considerations are given to a range of thinkers as diverse as Martin Heidegger, Gilles Deleuze, Pierre Bourdieu, Jean Baudrillard and Jacques Derrida in Boelstorff's attempt to construct: 'an anthropology of the virtual'.

Creativity is only constrained by the limits of one's own imagination, enabling one's consciousness to be relocated not necessarily through writing (Ong 1982) but through engaging creatively with a medium (Benton 1995). This engagement is achieved in the virtual world of Second Life, a world where participants can defy gravity, embarking on flights to exotic locales (sans technological assistance), discovering and experimenting with sexuality and gender, cultivating friendships unconstrained by physical limitations in *real life* and disregarding boundaries of time and geographical distance. These practices, as fantastic as they sound, can be accomplished through ethnographic immersion. Boellstorff's choice of an ethnographic methodology raises many pertinent questions regarding insights into the study of virtual worlds for the graduate student. The following review is a critical account of the strengths and limitations of the application of ethnography to virtual worlds.

Following the tradition of other authors, Boellstorff engineers a lucid account of the utopian and dystopian nature of interactions within Virtual Worlds (c.f. Dibbell 1998; Gibson 1984; Poster 2001). The introductory chapter is framed to appeal to the neophyte, where Boellstorff emphasises his initiation into fieldwork within the virtual realm of Second Life. The customs, ceremonies and transactions that the graduate student will come across in realms such as Second Life will be inculcated into their working practices, enabling a detailed explication of the environment under investigation.

Through engaging with the ideas presented, the reader can cultivate an appreciation of how to apply the methods and theoretical practices of anthropology in the actual world, to the study of similar phenomena in the supra-sensible realm of the virtual. Traditionally speaking, all methodologies and theories have pros and cons coded within their internal meta-theoretical frameworks. Thus, the following sections seek to explicate these dimensions in order for the graduate student to make an informed choice regarding the uses of ethnography and anthropology to the application of virtual world fieldwork.

A key feature of ethnography is that it is labour intensive and always involves prolonged direct contact with group members in an effort to look for rounded, holistic explanations.(Goulding 2005, 299)

By drawing upon Boellstorff's experiences as an anthropologist in actual life, the reader can appreciate the nature of just how the 'rounded, holistic explanations' asserted by Goulding can become accessible in these types of environments. As Boellstorff argues, 'tens of thousands of persons [sic] who might live on separate continents spent part of their lives online.' (p. 4). It is the question of accessibility which can assist the user in gathering data. This data possesses the attributes of 'thick description' (Geertz 1973). Participant observation, a key variable of traditional offline ethnography, is mirrored in the on-line world as contributing to the processes of data collection. Boellstorff notes an important factor regarding established and emerging virtual worlds: 'they have the capacity to change swiftly' (p. 17). In relation to methodology, Boellstorff cites the aim of his book is 'to demonstrate the potential of ethnography for studying virtual worlds' (p. 24)

Like other methodologies, ethnography has been criticised for its limitations. These limitations enable the researcher to frame their research politics in such a way, as to eschew any potential limitations raised. This can be something as simple as ensuring that procedures are in place to cover any ethical issues which may arise. Boellstorff does this by electronically gaining

the informed consent of his research participants. This allows the graduate student to avoid the pitfalls of this method for collecting and analysing data. Participant observation and interviews are cited as two main methods of data collection. For the graduate student, these methods can cause issues. Mann's claims regarding the limitations of web-based, virtual, ethnographic studies, highlights several areas for the graduate student to consider.

> The potential for [the] Hawthorne effect, wherein the presence of the researcher alters the online events, familiarity among the participants ... [the] reporting [of] multiple realities (which may contradict ... a burgeoning ideology or principle) and safeguarding ensuring the integrity of the data from malicious tampering. (Mann 2006, 442)

Boellstorff also utilises participant observation in Second Life, yet a key limitation of this methodology for collecting data is its 'generalisability' within other environments, such as IMVU, Twinity, The Sims or Habbo Hotel (Markham & Baym 2009; Kozinets 2009). Strictly-speaking, these are more chat rooms or PC games than virtual worlds, but the methodology would still be practicable in relation to these environments.

Boellstorff displays resolve in his ambitious project to operationalise what he terms 'providing a tool-kit for the virtual, by enacting the concept of techne' (p. 59) as a methodological tool in order to understand the creative processes associated with the concept (Heidegger 1977; Hansen, 2000). He asks, what can ethnography tell us about virtual worlds? (2008, 61). It should be noted that Boellstorff displays a disregard in relation to whether or not in world participants represent themselves truthfully, thus, one should be highly suspicious of in-world interlocutors' motives.

The practices of constructing the ideal representation of oneself are not historically unique, as one could say that statues of the Greeks and Romans were nothing but hyperbolic symbolism. After all, if narratives are constructed through subterfuge, of what value culturally are the results? The breadth, depth and topicality of the examples chosen, highlights the ever-evolving nature of online interactions and serves as a marker to emphasize the complexity of anthropology, and its associated methodologies of ethnography.

Anthropology is an intellectually challenging, theoretically ambitious subject which tries to achieve an understanding of culture, society and humanity through detailed studies of local life, supplemented by comparison. (Eriksen 2004, 7)

In closing, graduate students should be aware of a paper by Jeffrey and Troman 2004, which states that whichever option is chosen, utilising ethnography as a method for data collection and analysis is

purely dependent on the functions and context of the research:

> [T]he selection of the appropriate form is dependent on the contingent circumstances of the research and the main purpose of the research, and [they] suggest strategies for developing this work in contemporary circumstances. (Jeffrey and Troman 2004, 535)

They go on to assert that if graduate students follow an academic career route, they will unlikely be afforded the time to conduct a similar study again. Hence, for Masters and Doctoral postgraduate students, the advice would be (despite obvious limitations) to consider inserting the question into the framework posed by Neil Postman in a 1995 telecast: to what problem is ethnography the solution?

References

Benton, M. G. 1995. The Self-Conscious Spectator. *British Journal of Aesthetics* 35: 361-373.

Dibbell, Julian. 1998. "A Rape in Cyberspace." In his *My Tiny Life: Crime and Passion in a Virtual World*; 11-32. New York: Henry Holt and Company.

Eriksen, Thomas H. 2004. *What is Anthropology?* London: Pluto Press.

Geertz, Clifford. 1973. *The Interpretation of Cultures.* New York: Basic Books.

Gibson, William. 1995. *Neuromancer.* London: HarperCollinsPublishers.

Goulding, C. 2005. Grounded Theory, ethnography and phenomenology: A comparative analysis for three qualitative strategies for marketing research. *European Journal of Marketing* 39: 294-308.

Hansen, Mark. 2000. *Embodying Technesis: Technology Beyond Writing.* Ann Arbor: University of Michigan Press.

Heidegger, M. 1977. "The Question Concerning Technology." In M. Heidegger (ed.) *The Question Concerning Technology and Other Essays*, 3-35. New York: Harper and Row.

Jeffrey, B. and Troman, J. 2004. 'Time for ethnography.' *British Educational Research Journal* 30: 535-548.

Kozinets, Robert. V. 2009. *Netnography: Doing Ethnographic Research Online.* London: Sage.

Mann, Bruce. L.ed. 2006. *Selected Styles in Web-based Educational Research.* Hershey, PA: Information Science Publishing.

Markham, Annette. N. & Baym, Nancy. K. eds. 2009. Internet inquiry: conversations about method. London: Sage.

Ong, Walter. 1982. *Orality and Literacy: the Technologizing of the Word.* London: Methuen.

Poster, Mark. 2001. *What's the Matter with the Internet?* Minneapolis, Minnesota: University of Minnesota Press.

Hayley Trowbridge, University of Liverpool

Hansen, Derek L., Ben Shneiderman, and Marc A. Smith. 2011. *Analysing Social Media Networks with NodeXL: Insights from a Connected World*, Burlington: Morgan Kaufmann, 284 pp.
ISBN: 978-0-12-382229-1.

Analysing Social Media Networks with NodeXL: Insights from a Connected World (2011) explores the usage of NodeXL, a free template, designed to be used with Microsoft Excel, for the analysis of online social media networks. Hansen et al state that 'social network analysis is the application of the broader field of network science to the study of human relationships and connections' (p. 4). Whilst the authors acknowledge that this field of research is relatively new, it has flourished in the twenty-first century due to the 'new global culture of commonplace network connectivity', within which 'people have changed their lives by creatively using social media' (p. 4). Although social networks themselves predate these technological developments designed to mediate social interactions, it is precisely the inception of online social media, such as email, Facebook, and Twitter, that have made these networks more 'visible and machine readable', thus resulting in new opportunities to map them (p. 3). One of the outcomes of these new opportunities has been an explosion of literature within the field, including *Computational Social Network Analysis: Trends, Tools and Research Advances* (Abraham, Hassanien, and Snáel, 2010), which outlines social network tools and explores the central methodologies in social network analysis, and *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives* (Christakis and Fowler, 2009), which examines how social networks impact on our everyday lives.

What differentiates *Analysing Social Media Networks with NodeXL: Insights from a Connected World* from this canon of work, is that the book focuses on examining how NodeXL can be used to create visualisations of social networks and assist in their analysis. With NodeXL, researchers can input network data into a table format and, via the click of a button, produce a customisable visualisation of the network. These visualisations assist in the quantitative dissection of social networks, as they visually depict key players in a network, highlight those participants who rarely communicate, display participants in a network who regularly communicate, and illuminate participants in a network who link together other people within the network. Building on this quantitative analysis of networks, researchers can move into a more qualitative analysis by studying the ways in which visualisations of social media networks may change over time in line with social trends and cultural changes, and also hypothesise over patterns in human behaviour within these networks. NodeXL also allows networks to 'be imported from and exported to a variety of data formats, and built-in connections for getting networks from Twitter, Flickr, YouTube' (NodeXL, 2011, online).

The development of the NodeXL template was part of a larger research project funded by Microsoft Research External Research Projects group, which aimed to 'substan-

tially lower the barrier to entry for social media network analysis while at the same time raising the power offered to users seeking network insights' (p. ix). Whilst NodeXL is not the first social media analysis tool, it is one of the most accessible, as the authors of the book acknowledge:

> The tools for social media network analysis and visualisation have been emerging from many research groups and start-up companies. These pioneering network analysis tools often require programming skills and knowledge of technical network terminology, making it a challenge for those without programming skills to import and make sense of network data (p. ix).

In line with the project's aim and NodeXL's purpose, the authors have written this book with the assumption that the readers will 'have no prior knowledge of these topics' and with the purpose of introducing readers to social media network analysis via the use of NodeXL (p. 1). Structurally, the book is divided into three sections, which the authors analogise as being 'organised in the form of a tree, with roots, a trunk and branches' (p. 1). The roots are chapters one to three, in which the authors introduce the concepts, theoretical frameworks and literature/historical review of social network analysis; the trunk is chapters four through to seven, in which the practical application of NodeXL is

dissected into a 'how-to' style guide; and, finally, the branches are chapters eight to fifteen, in which various forms of social media networks are discussed and then analysed via importing information into NodeXL.[1]

The core theme that underpins the various sections and chapters is the exploration of the social structures and the organisation of various forms of social media, with the central argument being that '[n]etwork analysis provides powerful ways to summarise networks and identify key people or other objects that occupy strategic locations and positions within the matrix of links' (p. 5). Underpinning these matrixes, the authors argue, is a 'sociotechnical infrastructure' that 'influences social interactions' (p. 11). In stating this, Hansen et al insist that they are not presenting a methodological approach based on technological determinism, but instead are recognising that 'technologies change the fabric of the material world, which in turn changes the social world' (p. 12).

The authors perceive social media network analysis to be a key innovation in research methodologies for various industries and academic disciplines. Businesses can use this methodological approach to highlight the participants within their network who 'play critical and unique roles' (p. 4). Scholars from disciplines such as digital humanities can also use social media network analysis to understand the connections between people and the media/cultural artefacts that they are examining (p. 6). In my own discipline, film studies, social media network analysis can be used in order to uncover the ways in which the online word-of-mouth about films spreads, and decipher trends emerging within this discourse. Researchers from other disciplines within the social sciences could use approaches within this book to uncover trends within online communities, decipher how online communities are created and maintained, and about the structures of these communities.

One of the main strengths of the book is its authors' and contributors' clarity of expression, in terms of both the explanations of specialist lexis, and in the instructions concerning the usage of NodeXL. Some of the book's features, such as the chapters being preceded by concise outlines, key terminology explanations, and researchers' and practitioners' summaries at the end of each chapter, assist in making the book accessible to non-computer science-based readers. Additionally, advanced topics within the chapters are contained within coloured boxes allowing for them to be read independently of the main body of text, and key points or subjects are bullet pointed clearly or sectioned via bold headings.

Where the book does fall down, is in the layout of the instructions of how to use NodeXL. Firstly, the instructions are laid out not in a

step-by-step format usually found in instruction manuals, but instead in continuous prose. Secondly the visual instructions of the various steps are not always located on the same page as the written instructions, making using the visualisations with the written instructions difficult. This seems to undermine the foreword to the section in which it states that these tutorial chapters could be used in order to teach NodeXL to students, in the sense that the layout is not particularly learner-centred (p. 51).

Identified within Analysing Social Media Networks with NodeXL: Insights for a Connected World, are limitations with the methodological approaches presented in the book and with the NodeXL template itself. Whilst NodeXL does allow for the customisation of the appearance of the visualisations produced, it is only capable of handling networks of a modest size, which is about several thousand individual agents, operating within any given network (p. 54). [2] This means that larger networks cannot be clearly visualised via the template and therefore it would be difficult to effectively analyse them. Ben Shneiderman (2006) has proposed that when creating visualisations of networks, we should strive to ensure that every agent is visible, the number of connections between the agents is countable, every connection between each agent is traceable from start to end and that clusters/groups of agents can be easily

identifiable (summarised in Hansen et al, 2011, 47). Consequently, in order to maintain these standards and to use NodeXL, the authors and contributors suggest various filtering techniques to limit the data being analysed in any one network. In applying these strategies in order to make the data more manageable it could be argued that the data being analysed is not representative of the total social network. For example, a way of filtering an email social network could be to remove the infrequent email exchanges from the visualisation (p. 115). This therefore limits the network examination to one the looks at the agents that frequently exchange emails. However, in acknowledging these strategies for overcoming the template's limitations, the authors are making their methodologies transparent, and therefore justifying their approach.

What Analysing Social Media Networks with NodeXL: Insights for a Connected World does achieve, to a certain degree, is the democratisation of social media network analysis. It achieves this aim by clearly and concisely summarising research within the field, introducing readers to the language of social network analysis, instructing the reader as to how to use NodeXL for social network analysis, and by exploring network analysis across a variety of high-profile social media platforms. If what Hansen et al argue is true, that '[s]ocial media allow users to collaboratively create, find,

share, evaluate, and make sense of the mass of information available online…[and]…to connect, inform, inspire and track other people', then surely an approach which opens up the analysis of such a phenomena is valuable to the social sciences research community (p. 12). Whilst there are limitations with the book, the NodeXL template, and the methodological approaches at large, what is on offer to the reader is an accessible entrance into the world of social media network analysis.

Endnotes

[1] These chapters include studies written by the authors themselves and contributions from other academics working within the field.

[2] These agents, known as vertices or nodes, can be anything from people or organisations, to states and countries (p.34).

References

Abraham, Ajith, Aboul-Ella Hassanien, and Václav Snáčel, *Computational Social Network Analysis: Trends, Tools and Research Advances*, London: Springer-Verlag London, 2010.

Christakis, Nicholas A and James H. Fowler, *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*, London: Little, Brown and Company, 2009.

Shneiderman, Ben and Aleks Aris, Network visualisation with semantic substrates, IEEE Symposium on Information Visualisation and IEEE Trans, *Visualisation and Computer Graphics*, Volume 12, Number 5, pp733 – 740, 2006.

Web References

NodeXL (2011) <http://nodexl.codeplex.com/>, accessed 13/03/2011. <?>

Yann-Ling Chin, Nottingham Trent University

Unlike conventional academic books, this is a lavishly illustrated colourful book, reflecting the author's background as an artist who has worked with interactive technologies for many years. Written without academic pretensions, the book is highly accessible to the general public. Although the book does not engage explicitly in methodological discussions of studying Second Life (SL), it nevertheless presents an ethnographic account of the virtual world, written from the author's experience of living in SL. The book provides yet another example of how ethnography can be a viable method in studying virtual worlds such as SL. Ethnography is arguably the most natural way to gain an insight into life online from the perspective of the world's residents and providing rich contextual information for the interpretation of the data collected.

The book has no clear division of chapters. Instead, the contents can be roughly categorized into seven main sections, beginning with a definition of the word 'avatar' and its development. This is followed by an introduction to SL, including its subcultures, rituals and archetypes. Meadows engages readers through his journey from novice to becoming a reputable builder 'in-world', participating in virtual parties, experiencing crushes on other avatars, and problems of 'griefing' (violent attacks by other avatars). The book also includes a discussion of the public concern on the negative effects of addiction to virtual worlds, as well as its counter-arguments. Following this, he engages in a discussion of the real world consequences of online participation at the macro and micro-level. Meadows also predicts the future development of avatars, their applications, and potential in our everyday life. Finally, the last section deals with the forthcoming problems likely to engulf SL in the

near future.

In the opening pages, Meadows equates SL to Los Angeles in the 1920s; a promised land that attracted immigrants from all over the world, 'the dreams of Los Angeles and Second Life are similar; both say you can be someone else by simply setting foot there' (p.8). By treating SL as a bounded place with distinct cultures, it renders the ethnographic approach relevant: 'Second Life is more like a continent or city than a game. It is a landscape, one that is populated by avatar cultures as distinct as human cultures'(p.26). Contrary to most game worlds, such as World of Warcraft with predefined story plots, rules and roles, SL is a socially oriented world in which residents enjoy greater freedom and flexibility. They collectively influence the narratives and in-world rituals as the landscape of SL unfolds itself with emergent rules and roles. As pointed out by Slater (2002, 541), using ethnography to study new media presumes the existence of 'a social space that could be examined in its own right, as internally meaningful and understandable in its own terms'. This is precisely the position taken by Boellstorff (2008) in his study of SL. His research was conducted entirely within SL and he made no attempt to meet other residents' offline or visit Linden Lab, the company behind SL. For Boellstorff, virtual worlds are legitimate sites of culture and as such, they are a site of research.

Meadows' ethnographic study relies on participant observation, informal interviews with other residents in-world, and analysis of other publications about SL. In the book, Meadows does not mention any face-to-face meetings with other SL residents. Slater (2002) argues that whether or not offline information is needed when studying virtual worlds depend ultimately on the research questions. Similarly, Mann and Stewart (2000) contended that it is both accurate to perceive virtual worlds as domains in themselves and as an extension of actual everyday life, depending on the researcher's interests. Meadows, like Boellstorff, is interested in studying the underlying cultural logics of SL and, as such, it is not necessary for him to go beyond the virtual world. However, as Meadows' second objective is to study the consequences of having a SL, it becomes crucial to contextualize participants' online communicative practices within their everyday life. Meadows' failure to do so could be due to limited resources to follow residents offline. Instead, he draws primarily on his personal experiences, reflections and exchanges with psychologists and third party accounts, to present the consequences of participating in SL. In other words, the limitation of Meadows' book lies in its oversight of the importance of bridging the online and offline world in the discussion of SL's impact on residents' everyday life.

The book focuses predominantly on avatars, documenting the history of avatars from the initial string of texts to sophisticated 3D phantasmagoric creatures, and the roles, rituals and subcultures of SL. Meadows defines avatars as representations of participants in online social environments which allow participants to interact with others. In brief, sociability and interactivity are the two defining features of an avatar; the virtual embodiment of participants. After providing a brief introduction to other virtual worlds, Meadows chooses to concentrate on avatars in SL because of its metaphor free structure that allows residents maximum levels of control and customization, not only of their avatars, but also the in-world narratives. Due to the social architecture of SL, studying in-world avatars may shed more light on the motivations, identities and the meanings people ascribe to their second life and the impact of SL on their 'first life'.

Perhaps aware of the warning that one cannot fully participate and observe simultaneously (Boellstorff, 2008), Meadows seems to prioritize participation above observation, arguing that 'in order to enter any society, one must have a role. You must know something about the rituals and archetypes. You must have something to do there' (p. 48). Playing a role in-world facilitates the understanding of the culture and of the social interaction with others. In SL, Meadows builds houses, furnish-ings, skins, body shapes, clothes, jewelry and more. The Linden dollars he earns in-world can be converted into real cash. The income generated from this intangible form of labour online has a profound impact, changing the nature of the interaction as it highlights the permeability of the border between the online and offline world. Other forms of participation, such as talking about real world concerns and emotions, organizing offline events in-world, visiting offline business corporations and institutions' SL premises, not only alter what is being observed in-world, but also highlight the blurry boundary between residents' first and second lives. Put differently, SL may seem like a distinct independent sphere with its unique cultures and subcultures, however, the line between the two worlds is permeable and mutually penetrable.

The book also focuses on the meanings and significance of avatars to their drivers, and on the consequences of excessive identification with avatars. This discussion, again, puts the issue of the distinction between the online and offline at the centre of attention. Just as participants' actual everyday life conditions have a direct bearing on their avatars and level of participation in SL, avatars and life online can also affect participants, mentally and physically, due to the amount of time spent in-world. On the macro-level, SL avatars have ramifications

on the real world's politics, finance, education, religion, research, family institutions and environment. For example the author cites real life politicians making appearances as avatars online to interact with their constituents during elections, university professors conducting classes in SL, and a report claiming online infidelity leads to an increase in divorce rates. Furthermore, what renders the virtual real is the collective construction of reality that takes place when residents collectively share a narrative, suspending disbelief to create the grounds of belief. 'So a virtual glass of wine above a virtual ocean shared with an avatar is as important to us, psychologically and socially, as a real glass of wine on a real cliff with a real friend' (p.51). This idea of the reality of virtual encounters supports the argument that a virtual world can be studied entirely in its own terms.

Ethnography in virtual worlds faces greater ethical challenges than ethnography in physical fields. Data may be easily available online, but to what extent a researcher can 'harvest' this open data is a contentious issue (Sharf, 1999). Whether or not to disclose researcher identity and intention when participating in virtual worlds, is yet another subject of debate. A lack of clear guidelines means that researchers, especially novices, can easily cross the line and risk offending others, infringing their copyrights or compromising their anonymity without awareness.

The discussion of ethical issues is absent in the book. Therefore, it is unclear whether permission was sought before Meadows published chat logs with other residents in the book. Putting aside the two methodological limitations, this book is useful because of its readability and the thought provoking arguments that problematize the simple division between the fictional and the real, and boundary between the online and the offline.

References

oellstorff, T.. 2008. *Coming of Age in Second Life: An Anthropologist Explorers the Virtually Human.* Princeton and Oxford: Princeton University Press.

Mann, C. and F. Stewart. 2000. *Internet Communication and Qualitative Research: A Handbook for Researching Online.* London: Sage.

Sharf, B. F. 1999. Beyond Netiquette: The Ethics of Doing Naturalistic Discourse Research on the Internet in S. Jones (ed.), *Doing Internet Research: Critical Issues and Methods for Examining the Net..* London: Sage.

Slater, D. 2002. Social Relationships and Identity Online and Offline in L.A. Lievrouw and S. Livingstone (eds.), *Handbook of New Media: Social Shaping and Consequences of ICTs.* . London: Sage.

Kristeen McKee, Huntington University, Sudbury, Canada

Peachey, Anna, Julia Gillen, Daniel Livingstone and Sarah Smith-Robbins, eds. 2010. *Researching Learning in Virtual Worlds*. London: Springer. 193pp. ISBN: 978-1-84996-046-5

The research methods and findings featured within the ten chapters of *Researching Learning in Virtual Worlds* share a common theme of boundary crossing. Distinct in their approaches to research and varied in their pedagogical commitments, the many contributors permeate a new frontier as they navigate between data and dialogue, quantitative and qualitative methods, physical and virtual realms, as well as other contested spaces.

The body of work contained in this edited collection reflects the collaboration between disciplines and the confluence of technologies needed to explore the politics of pedagogy as teachers, researchers and learners migrate to virtual worlds. Readers are invited to cross many boundaries traditional barriers are transcended while new obstacles take form. One obvious obstacle is that virtual worlds occupy borderlands which call into question the role of the researcher, the value of methods used, and validity of

findings, all within a landscape that requires further exploration. While some of the contributors to *Researching Learning in Virtual Worlds* see methodological value in the ambiguity of roles and the permeability of places within virtual worlds, others are determined to question this borderlands space. From game-based programs to World of Warcraft, the entries in this book explore virtual cultures, particularly what they promise and prohibit, as 21st century scholars continue to research virtual worlds, bringing with them new divides and distinctions.

Prior to reading this edited collection, one should be warned that the virtual platforms or digital cultures included in this book are few. In fact, throughout the book, the spotlight is often on Second Life where many contributors call for critical reflection on the ways in which virtual experiences in SL are approached methodologically. Although entries on Second Life are more repetitious than they are complementary, there

is merit in reading Elena Moschini's work on researching in Second Life for she is gentle to readers by providing an expansive profile of the research methods and evaluation criteria that underpin educational research projects in SL. By engaging in definitional work and by providing readers with a generous toolkit, the author of this particular chapter dedicates more space to providing answers than to asking questions.

Since the focus of this edited collection is one that concerns itself with the pedagogical interactions in virtual worlds, many of its authors explore what occurs when researchers cross curricular boundaries. As a result, readers are exposed to an array of methods, from experimental design to descriptive statistics. Although a great deal of space is reserved to quantitative methods, those interested in qualitative methods will be satisfied to learn that Carr, Oliver and Burn's chapter takes readers through a reflective journey where the collaborators document their encounters as well as the personal experiences of their teaching subjects who use SL. What this chapter highlights is that personal narratives can enrich pedagogical research, as scholars' track the various phases of learners who navigate their way through a host of virtual worlds. Another exceptional read is Julia Gillen's chapter on new literacies in Schome Park where the author applies virtual ethnography to investigate the communicative

activities that are deeply entrenched in this virtual realm. In this chapter, the author concerns herself with the future of pedagogy and the new literacy activities it permits. This causes pause for reflection on the role of teachers and learners as meaning makers who are embedded in the technologies of our time, with virtual worlds as their focal point.

Readers of *Researching Learning in Virtual Worlds* will likely appreciate the ways in which the many contributors are committed to exploring the application of varied theoretical perspectives that inform and influence educational research projects in virtual realms. By taking us on quick tours of learning theories, and by presenting findings of experimental design in SL and other borderland spaces, readers gain a sense of the changing role of the researcher, as virtual communities can radically transform research settings and subjects. At the book's conclusion, readers are likely to find themselves in a state of ambiguity with more questions than answers, particularly for the hopeful scholar wishing to pursue such a site of exploration. For starters, readers might inquire as to whether virtual worlds require a mixed-method approach, where both quantitative data and qualitative dialogue are necessary to fully account for the endless boundaries that are continually crossed. Since this book provides readers with the "how-tos" required to conduct data collection

in previously unchartered territories, there is value in reading Livingstone and Bloomfield's chapter on applying mixed-methods in mixed-worlds. However, beyond this chapter, little insight is offered as concerns the values of crossing methodological boundaries in virtual worlds.

While contributors and readers of this edited collection may be divided in seeing the value of employing mixed-methods in spaces like Second Life, they are likely to agree that virtual worlds are indeed mixed worlds. As such, readers may also question the mimetic qualities that virtual worlds offer, whereby "old" theoretical paradigms inform new spaces where research is conducted. Fortunately, the book's contributors provide a thorough account of the challenges and opportunities that virtual worlds provide – with the contested border crossing of the physical and virtual being chief among them. What many authors propose is that a mixed-world calls for new methods, as scholars permeate between spaces that are seemingly similar yet strangely unfamiliar. If there are doubts about the divisions between the two worlds, chapters four through seven make cases for the possibility of hybrid methodologies where research may be conducted, analyzed, evaluated, reported and presented within and outside of physical realms. As such, the many authors who reveal their questions and findings in these works write about the need to ac-

quire new knowledge, to expand our roles as researchers, to extend research skills and to develop novel methods and models. In sum, these authors provide compelling accounts of how resources can be acquired and roles can be developed which includes mention of software programs, supporting communities and seminal references to list a few.

As virtual spaces like Second Life continue to capture the interest of students and scholars alike, research on pedagogy in virtual words remind us that we are not quite as indigenous to this borderlands space as we once thought. The collection of chapters in this book demonstrates the ways in which teaching and learning in new settings have indeed moved outside of and beyond exploratory exercises. In fact, if the reader is to take one message from *Researching Learning in Virtual Worlds* it is this: virtual worlds are mixed-worlds which call for hybrid methods and new models for research where new communities of scholars and extended resources are offered. Together, the authors provide a convincing account of the ways in which virtual worlds have not only paradigmatically shifted the dynamics between teachers and learners but the ways in which we approach the spaces and subjects of our studies as well.