CATaC 2014:
Culture, Technology, Communication

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PREFACE

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In 1998, Fay Sudweeks (Murdoch University, Australia) and I (Charles) organized the first conference devoted to questions of "Cultural Attitudes towards Technology and Communication" (CaTaC), held in the Science Museum, London, July 31-August 2. The conference was inspired by a kind of culture shock on my part, as I visited Oslo in 1997 for a conference on technology and democracy. The Oslo visit was the first time I had been out of the States since the "PC Revolution" of the early 1980s. Despite everything I had learned from earlier travels and studies abroad about the naïveté of presuming that everyone else in the world thinks, believes, feels, and behaves pretty much as "we" do – I nonetheless went to Oslo assuming that my colleagues and others in this part of the world would use the various communication technologies and venues made possible by ICTs, and most especially the Internet, in ways more or less identical to those familiar to me from my U.S.-based experiences and research.

Of course, I was profoundly mistaken. It quickly became clear that my Norwegian colleagues and people in this part of the world more generally were *not* using CMC in exactly the same ways as "we" did in the States. Moreover, the multiple experiences of *different* usages, responses, interests, etc. affiliated with the new communication technologies powerfully brought home the now obvious but still critical fact that "culture" (however problematic, still useful as a heuristic concept) deeply interacts with our communication preferences and thereby our designs, implementations, usages, and multiple responses to ICTs.

At the time, however, this insight and claim counted as something between the radical and the blasphemous, at least within the heavily U.S.-centric research and research communities of the day. At the same time, it seemed clear that the dominance of such U.S.-centric approaches and perspectives thereby ran the risk of all ethnocentrisms – namely, of falling into various forms of overt and/or covert forms of conceptual imperialism and colonization of "the Other". Both for the sake of scholarly commitments to our best approximations of informed and truthful insight, and for the sake of building up knowledge that might offset the risk of our scholarship inadvertently fostering a kind of "computer-mediated colonization," it seemed deeply important to foster a more inclusive, cross-cultural and interdisciplinary approach to ICTs. This is how our biennial conference series began.

CaTaC 2014 is the 9th such conference, some sixteen years later – an aeon or two in Internet time. Very briefly: we (Maja and Charles) can point to a number of contributions from the conference series – first of all, as hoped, towards building what is now an almost mainstream recognition that of course "culture" makes a difference, and that these differences must be respected as we

continue to design, deploy, and take up ICTs across an increasing range of cultural settings around the globe. To be sure, some of this growing recognition is the all-but-inevitable result of the extraordinary explosion of the Internet – from a communications technology that in 1998 was still dominated by North American users (ca. 84% - the considerable majority of whom, moreover, were white and male) to one that is now accessible in some form or another by more than 3 billion people; and of these, the largest number live in Asia (45%) – more than twice that of Europe (19%), while North American users now count as ca. 10% (<http://www.internetworldstats.com/stats.htm>).

We also think it fair to claim that some of this growing awareness of the central importance of culturally variable values, norms, practices, and communicative preferences may be counted as direct results of the scholarly successes of the conferences – including a range of publications and recognition from the Australian Research Council that the series stands in the top 20% of academic conferences concerned with ICTs. More indirectly, but perhaps more powerfully, CaTaC has also encouraged and fostered the work of a significant number of younger scholars – scholars who often felt themselves to be profoundly isolated and bereft of academic resources and collegial support in their home departments, but who found a critical but warm and generous community of like-minded souls at our biennial gatherings.

At the same time, as attention to "culture" has become more and more mainstream, our once-defining foci on culture and communication vis-à-vis ICTs is now much more broadly diffused – and many current and former CaTaC participants are finding fruitful and supportive homes in diverse sorts of departments, disciplinary publications, and so on. Hence one of the goals of CaTaC'14 was to take stock and critically reflect upon how we might now revise and redefine the foci of our research and scholarship in these new contexts. As well, reflecting the increasing recognition that culturally variable norms, beliefs, practices, as well as communicative preferences inevitably shape the design of ICTs and new communication venues from the outset – our conference call for participation highlighted attention to the *design/production* and *practices* of information and communication technology.

The *design/production* theme asked how technical, cultural and communication affordances and constraints intersect in the production of technology, messages and theory construction. The following tracks were suggested:

- Designs for Good Lives in a Mediated Age
- Trans-mediated and intelligent workplaces: Implications for work analysis and interaction design
- Technology Design: Politics and ethics
- Legal and Ethical issues
- Research Design and Theory Development

The *practice* theme had the use of information and communication technologies in specific cultural contexts as its main focus. It suggested the following tracks:

- Cultural Diversity and Global ICTs

- Global and Local Cultures of Computing
- The construction of identity using online social media, gaming, and blogging platforms
- Political activism through social media
- Privacy issues in media environments that encourage public identities.
- Analysis of Cultural Discourses about technology that shape understanding and use

CaTaC'14 attracted participants from 12 countries, whose contributions are listed in the Table of Contents following the organization of the conference program. At the same time, you will find running through these diverse contributions several "red threads" that have characterized CATaC interests from the beginning – including attention to matters of democracy, gender, and ethics – where the last entails the ethics of ICT design, implementation, and uptake vis-à-vis risks of cultural imperialism. A further common thread is our insistence on moving beyond "the user" to *persons* as ethical agents, subjects, and *embodied* persons – i.e., not simply "brains on a stick" somehow disconnected from the larger weaves of their distinctive communities, traditions, histories, and so on. These interests are apparent especially in our two keynote addresses and a conference paper:

Judith Simon, Who can know what? Relating epistemology, ethics & politics in big data practices

Andrew Feenberg, The Internet in Question

Michael Dahan, Mouli Bentman, The Democratic Paradox: Citizen Oversight of Parliament and its Unintended Consequences.

Moreover: "culture" emerged in the 1998 conference as a highly problematic concept – and a considerable amount of subsequent conference presentations (at least through 2008) were devoted to critically re-evaluating what we could mean, if anything, in operational or empirical specifics by "culture." A good part of the response to this problematization of "culture" is to shift to what can be characterized as micro-level approaches. Roughly, micro-level approaches take "culture" as a very broad background to highly specific behaviors of a particular group that are then documented, observed, and/or analyzed. These approaches are represented here by:

Suely Fragoso, 'Huehueheu' 'Br?Br?': The Carnivalesque Griefing Behaviour of Brazilian Online Gamers

Fiona Brady, Laurel Evelyn Dyson, Enrolling Mobiles at Kowanyama: Upping the Ant in a Remote Aboriginal Community

Suhas Govind Joshi, Emerging Ethical Considerations from the Perspectives of the Elderly [in Oslo]

Margaret Machniak, In Pursuit of Cool and its Implications for the Design Process

Drew E. VandeCreek, Jaime Schumacher, Faculty Members and the Preservation of Digital Materials at Five American Universities, and

Cecilia Oyugi, Souleymane Camara, José Abdelnour-Nocera, A Reflection on Designing Low-end Interactive Products for Rural Users in Sub-Sahara Africa

Finally, more meso-level approaches take up "culture" as defined by either language and/or membership in a given nation-state:

Marie-Christine Deyrich, MOOCs in Higher Education: From Global to Local Perspectives

Michele M. Strano, William Canter, Newspaper Coverage of Facebook across Three English-Speaking Countries

Malin Sveningsson, "Not Quite the Real Thing": Young Swedes' Experiences of Getting Political Information through Social Media

Patrizia Schettino, Rethinking the Immersive Cultural Experience in Museums. A Crosscultural Analysis of Visitors' Behavior Based on Roles.

Maja van der Velden, Re-Politicising Participatory Design: What Can We Learn from Fairphone.

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Gwyneth Sutherlin, Groupthink: ICT Design with Culture in Mind

Satomi Sugiyama et al (panel), Cross-Cultural Understandings and Designs of Social Robots as Co-Agents of Good Lives

We are confident that you will find in the *Proceedings* any number of research approaches, findings, and critical reflections that will contribute – perhaps at the most fundamental levels – to your own interests and work in matters of culture, technology, and communication. If you find yourself inspired and intrigued – please consider participating in the next CaTaC conference in 2016. It is too early to offer details here, but we encourage you to sign up for the CaTaC mailing list (catac@philo.at) through which CaTaC-related information can be shared, including the next conference call for participation, etc. Also the CaTaC website (catacconference.org) is a good place to find information about CaTaC conferences. On this site you will also find links to past proceedings as well as a link that enables the download of the individual papers of these 2014 *Proceedings*.

We wish to express our sincere thanks and appreciation to Herbert Hrachovec and Michele Strano for organizing the paper review process and to Suely Fragoso for undertaking the editorial and composition work required to make this Open Access publication of the Proceedings possible.

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MOOCS IN HIGHER EDUCATION: FROM GLOBAL TO LOCAL PERSPECTIVES

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Keywords: *MOOCs, higher education, cultural discourse, contexts, legitimization*

Abstract: *This paper introduces a comparative study of responses that emerge from the introduction and maturation processes of the MOOC phenomenon. Issues related to the rise and implementation of MOOC technology are examined and contrasted: first in the European context, then in the institutional framework of France and then in the French-speaking literature. Set within the global landscape of technological innovation in higher education, the analysis of the corpus under survey gives an overview of the contextualization of issues related to discursive legitimization.*

1 Introduction

Among the challenges which affect higher education teaching and learning in France, the issue of massification is estimated to become problematic. Implementing online courses can therefore be seen as a fall-back option for universities despite the many obstacles this poses for learners. New models of learning such as Massive Online Open Courses (MOOCs) (Irvine & al., 2013) should be considered. The possibility of massification of courses opened up by MOOCs provides a good opportunity to rekindle the debate over the interaction between the potential of innovative new technology and its ongoing legitimation process when emerging in a specific and cultural context. The focus here will be on a selection of 'small narratives' (Lyotard, 1979) which illustrate some aspects of the context-based variations of the MOOC digital entry.

1.1 Beyond 'metanarratives'

Among the many definitions of MOOCs that can be found online, the portal of a pan-European initiative called OpenupEd proposes the following one:

> *"MOOCs stand for Massive Open Online Courses. These courses can be fully taken online. They are 'open' in the sense that they can be accessed by anyone anywhere as long as you have an internet connection, and that they are free of charge. And they are called 'massive' because generally they go for large target groups."*

These courses which are rooted in the ideal of openness in education take advantage of internal networks (Cisel & Bruillard, 2012; Gaebel, 2013; Haggard, 2013). They put into practice Siemens's connectivist theory (Siemens, 2005) which is reflected in the new format of online courses developed by Dawes: ever since this innovation the number of MOOCs courses offered has increased dramatically all over the world (Gaebel, 2014). Thus, when it comes

to the impact of technological innovations and more specifically to the sudden rise of MOOCs, comparisons may seem unnecessary because of the global response to the phenomenon: considerable public attention (Briant, 2014), "waves" made by MOOCs and open education in higher education (Kirschner, 2012; MacGregor, 2013). Our contention is that in the higher education field, global implications of innovations should be assessed both in terms of harmonization and hybridization to account for legitimation problems (Peters, 1995) and that at the same time, specific attention should be paid to regional aspects, contextual and cultural differences (more specifically here: Anglocentric vs the rest of the world vs Europe vs French-speaking countries vs France).

1.2 Confronting change: a worldwide vision?

Are we entering a new digital era with the invasion of MOOC technology in higher education (Daniel, 2012; MacGregor, 2013)? Are we witnessing a revolution that could leave its mark on higher education (Cisel & Bruillard, 2012; Aoki, 2013)? These vexed questions might provide deeper insight if treated on a comparative level. In effect, the MOOC movement which first emerged in the US was soon adopted by a large community around the globe albeit in accordance with different approaches and implementation modalities (Gaebel, 2013, 2014; Haggard, 2013). In this comparative strand, discourses will be studied to reveal cultural attitudes towards technology and communication, a necessary step when accounting for culturally-grounded specificities and commonalities.

In the introduction of their White paper, Yuan and Powell (2013) acknowledge that although their report places the phenomena of MOOCs in the wider context of changes taking place at a time of globalisation, it was written "from a UK higher education perspective". Expectations of a culturally specific approach are soon dismissed since the sentence ends with 'but, it is largely informed by the development in MOOCs from the USA and Canada". Accordingly, market-oriented analyses tend to be at the forefront: 'differential pricing and pursuit of marketing activities' 'potential business models, 'changes to funding' and so on. The development of MOOCs outside the 'Anglocentric hothouse' (McGregor, 2013) is often perceived as a homogeneous phenomenon which fuels "strong involvement with professional needs, wide experimentation and enthusiastic engagement in all significant geographies" (a British government review quoted by McGregor, *op. cit.*).

1.3 Progression in Europe

The rapid evolution in the distribution of MOOCs in Europe (from 276 European MOOCS in September 2013 to 345 in October 2013, *cf. figure 1*) can be ascribed to enthusiasm. It can also be explained by higher visibility and improved information gathering (Gaebel, 2014).

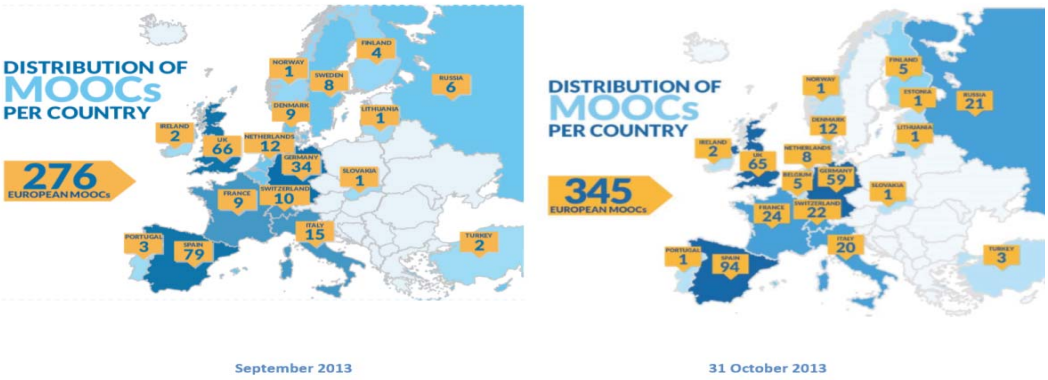

Figure 1. : European MOOCs – Source: EU Open Education Europe Portal

On the basis of a review of the literature assessing the state of MOOC developments internationally and in the UK, Haggard (2013) asserts that "The MOOC is maturing [...] after a phase of broad experiment". The maturation process should be gaining momentum progressively even though European universities took a longer time to get involved. It can however be hypothesised that the maturing process will present a common core of questions and issues though this process, and will at the same time take on different forms in different contexts.

2 Localized narratives

2.1 Institutional narratives in a French setting

MOOC made its official entry on September 21st 2013 in the 'Official Journal': "*cours en ligne ouvert à tous*", which are defined as "courses accessible to all, provided by higher institutions, companies, organizations or individuals, and which offer the possibility to assess one's knowledge and lead to certification". Two acronyms are provided: CLOM (*Cours en Ligne Ouvert et Massif*) for the French version, an acronym nobody actually uses, and MOOC, considered as a foreign equivalent.

Governmental support was further illustrated in autumn 2013 by the launch of FUN (France Université Numérique: France Digital University)[1] and its official opening by the Ministry of Higher Education and Research. Two points were brought forward: first, although initiatives had already been implemented at individual universities, there was no national platform to pool MOOCs and secondly, the platform was aimed at allowing dissemination and promotion of the teaching offered by French higher education establishments in France and abroad.

The investment, which is part of France's overall digital plan for higher education, is considered as a means to 'catch up' on the online courses offer since, as explained by the Minister for Higher Education and Research in her

1. http://www.france-universite-numerique.fr/

opening speech, only 3% of French universities offer online courses compared with 80% in the US. Joining the open digital band wagon, however, is but one aspect mentioned in speeches and reports. Other political aspects cover internationalization and democratization issues, specifically the promotion and development of French-language MOOCs to link 'North' and 'South' higher education institutions. From the start of the 2014 academic year, the platform has begun offering online courses, promoted by the ministry for jobseekers, for those 'already in work', as well as for students.

In summary, political involvement is at the heart of the French project and social commitment is a major issue. According to these engaged institutional discourses, France has reached a new milestone in the global technological race. However, bearing in mind the idea that the power of language discourses arises from the institutional contexts in which they take place (Bourdieu, 1982), the statement actually needs qualification when compared with the Open University experience and the universities involved in the Future learning platform in the UK for example.

The impact of the strong political involvement on the French academic community has not been assessed yet, but reactions could be rather controversial in a cultural background where the "high score on Power Distance and a high score on Individualism is rather unique" (Hofstede & al., 1997). Academic investment for the university sake is thus likely to bring about some reluctance: "rethinking university" (Laurillard, 2013) involves individual and community engagement, which means that problems related to tensions, ambiguities and uncertainties deserve priority attention.

2.2 Localized narratives compared

A systematic review of the literature about MOOCs published in July 2013 pointed out that most research had investigated the learner perspective, with a significant minor focus on the institutional threats and opportunities (Iyanagunawardena, & al. 2013). In order to explore the matter, a selection of sources in English and in French is being analysed. For the latter contributions, the focus of the ongoing analysis is an online corpus written in French: 132 contributions between January 2013 and January 2014 gathered on the open wiki by Michel Briant (2014): a variety of articles, news releases, texts from seminars, reports, etc., leaving deliberately aside videos and links to conferences and workshops since most of them are in English.

2.3 Responses to the MOOC challenge

This section provides a brief overview of some Francophone responses to the MOOC phenomenon, generally observed to be a controversial issue: "a welcome or a threatening prospect" (Haggard 2013). The title of a seminar due to take place on March 19th 2014 illustrates the point:

> *"Les MOOC au milieu du gué : opportunités et menaces d'un modèle à inventer/ MOOC in midstream: opportunities and threats related to a model still to be devised"*

Here are some examples of characteristic responses observed in the contributions list on the above mentioned site (Briant, 2014). The translation in English is proposed after the French citations which appear in italic.

Five major recurring themes are listed here:

- Pros and cons are discussed in heated debates:

"Le jour de gloire des MOOCs est arrivé/ The day of glory has arrived for MOOCs" (about 'Open Education Europa', January 2014).

vs.

"MOOC ? Non, merci disent-ils.../MOOC? No thanks, they say"(about an anti-MOOC collective, January 2014)

- The impact on higher education is debated:

"Le numérique va-t-il bouleverser l'enseignement supérieur ? Is digital technology going to upset higher education?" (TELECOM ParisTech: November 2013)

vs.

"Les Mooc, la ruine de l'université ?/MOOC, the ruin of higher education? ", (ENS-Lyon : October 2013).

- Questions arise about the teaching profession:

"Les MOOCs vont-ils renouveler le corps enseignant ?/ Are MOOCs going to renew the teaching profession ? " (from a blog, December 2013).

- Other contributions are about the impact on the educational landscape:

"La percée des MOOCs dans l'enseignement et en formation continue/ The breakthrough of MOOCs in teaching and further education" (from an educational journal, October 2013)

- Some contributions are from the learners' perspective:

"Mooc : Apprendre n'importe où, n'importe quand, tout ce qu'on voudrait/Mooc : Learn anywhere, anytime, whatever you want" (newspaper on line, December 2013).

This sample of analysis leads on to the idea that the maturing process is still in the making within the French-speaking context. Other issues are now being explored for an in-depth assessment of the academic professional positioning and involvement in the pedagogical evolution related to openness and collaborative aspects.

3 Perspectives and emerging debates in French higher education

Responses to innovations in digital technology can vary according to contextual factors. The subject is discussed to determine whether practices and opinions are actually impacted and if so how?

3.1 Awareness, expectations and practices in universities

Has the MOOC craze really changed university teaching and learning? This does not seem to be the case in the French context. A recent survey, entitled "*Les usages pédagogiques du numérique*/ Pedagogical uses of digital technology" (MESR, 2013), shows that MOOCs have had a very limited pedagogical impact on higher education, both for students and teachers. First, it shows that the acronym is far from familiar for the majority of respondents. As shown in figure 2, despite 25% of students having already heard about MOOCs, only 5% declare knowing what it refers to. As for the teachers, they are more informed (41%) but only 18% know what it is.

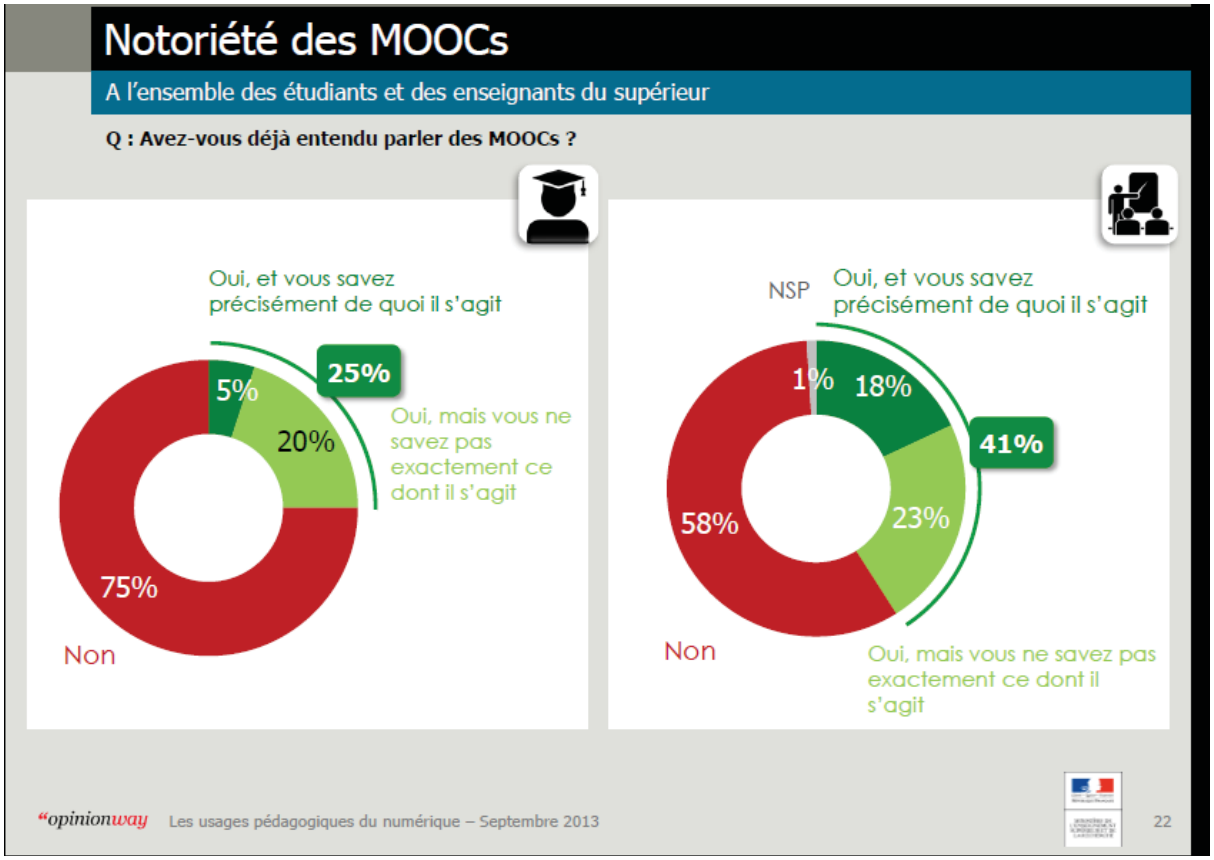

Figure 2: Have you already heard about MOOC? - Source: MESR 2013.

The survey also points out that MOOCs have not become established practice yet: only 10% of students and 3% of teachers have registered on a MOOC. Paradoxically, students and teachers alike mention potential benefits

of open access platforms and consider that the implementation of platforms dedicated to MOOCs is an important challenge for universities, respectively 90% and 84%.

This technology is cited as a means to support the educational mission of the state mainly for the transmission of knowledge: 80% of students and 82% of teachers. The two groups share the same vision but planned use is different and appears as a daunting prospect for teachers (*cf.* figure 3): 94% of the students say they will use online platforms and almost 60% as a complement of their traditional courses and while 77% of the teachers say they are ready to use this type of platform, a majority of teachers (59%) accept planned use as long as it involves a digital publication of their courses.

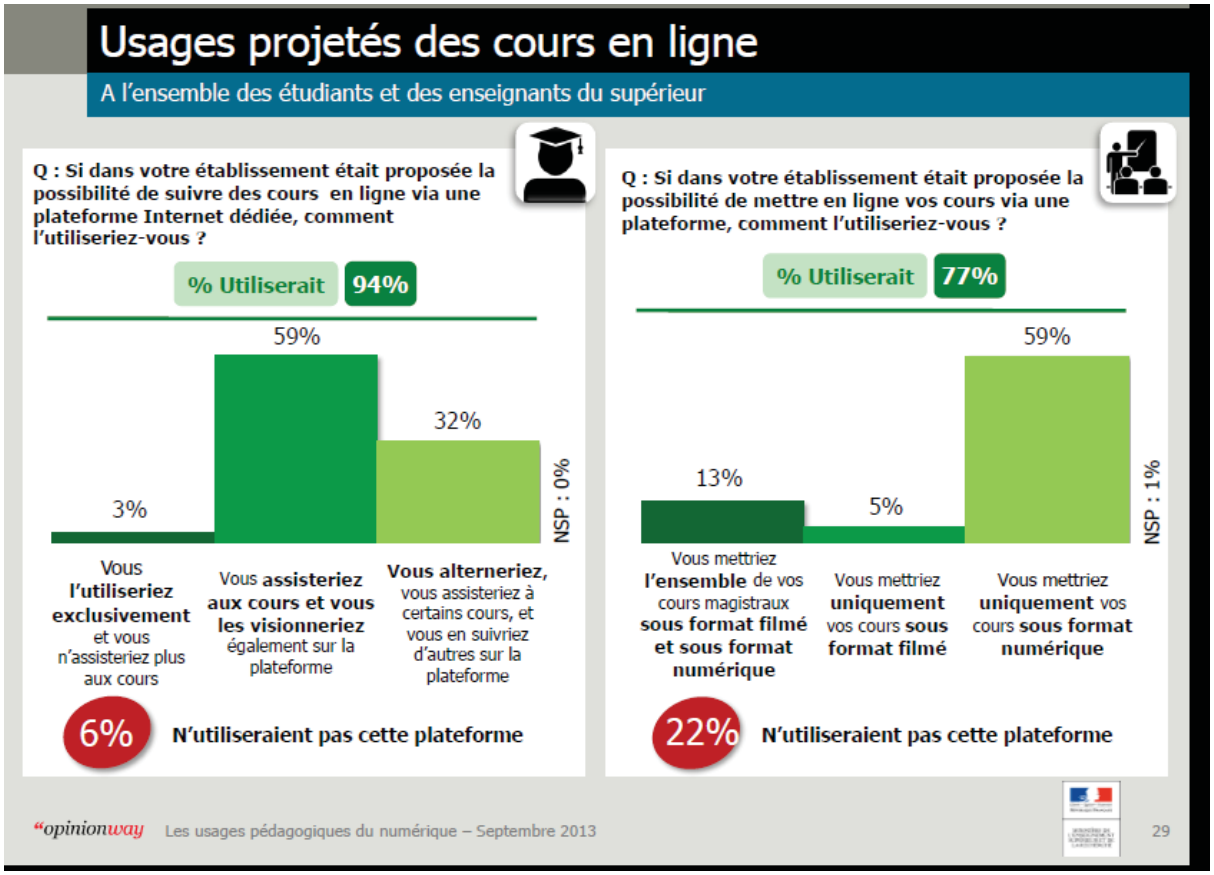

Figure 3: Planned use – Source: MESR 2013.

3.2 Cultural settings

Because MOOC courses are open on a global scale to anyone who has access to the Internet, cross-cultural relevance is difficult to achieve, as Nkuyubswatsi (2014) points out. The author considers that addressing students in their respective cultural settings presupposes adaptations and cultural translations and advocates thus that some flexibility in the design should allow students to adjust to their specific settings. We may however wonder whether tailor-

ing MOOCs for a diversity of settings does not have imperialistic undertones and interests. Mathieu Cisel (2013), a doctoral student preparing a thesis on MOOCs, pinpoints the underlying commercial intention in a paper titled "*Vers une colonisation de nos systèmes* éducatifs?/A first step to the colonisation of our educational systems?" Worries about the purposes of cultural domination are also expressed by Martin Granjean (2013), Swiss researcher in digital humanities, in a paper entitled '*L'inquiétant impérialisme du MOOC*/Under the threat of MOOC imperialism".

'*L'Amérique propose – L'Asie suit – L'Europe s'interroge*/America puts forward – Asia follows up – Europe ponders": this title of a paper by Sophie Touzé, research engineer in e-learning for higher education, seems to capture the underlying attitudes in the current digital flow and the translations of this 'progressive' imperialism within consecutive cultural recontextualisations. Moreover, exporting MOOCs into the world market can be considered as synonymous with loss in translation, not only cultural but also linguistic, the two losses being tightly intertwined.

In French-speaking countries, the issue of languages has been much debated:

- In terms of sovereignty, first, as exemplified in an interview by Jabba (2013), where Frank Pacard, deputy director at the École Polytechnique, says that there is concern that Cousera courses in English will merely be translated into a French version and he adds that this could be the case for all basic courses translated in a variety of languages.
- Then at a time when globalization is redistributing the cards in terms of poles of global influence for Francophonia (the French language community): Guillou (2012) considers that the challenge to promote the French language is now going digital in order to foster intercultural dialogue and solidarity as much as economic development. From this perspective, the issue has thus become highly strategic: the missions fulfilled by the MOOCs comprise the transmission of knowledge but, according to Granjean (*op.cit.*), the main specific task which they serve is to take strategic advantage of the globalized higher education ground, which is undergoing fundamental changes.

3.3 Pedagogical issues vs. market issues

MOOCs are considered to provide a key opportunity to revisit questions about the place allotted to the learner and the role of the teacher in current education systems; the pedagogical model is therefore questioned:

The model is declared to be utterly transmissive:

> *"Freinet wouldn't believe his eyes. Neither would Dewey. And Piaget would be turning over in his grave. Who knows?" writes Olivier Toutain, lecturer at the ESC group of Dijon Bourgogne, in his paper titled "De qui se MOOC-t-on? Whom are we moocking fun of?"*

Standardization in the implementation of the model is considered as a major disincentive to diversity and creativity because, as Martin Grandjean

(*op.cit.)* explains, when face to face with their computer screen, students will simply get on with tasks set without the further thought and reflection traditionally required. The pitfall of such an environment is an increase in the standardisation of knowledge which is contrary to what is in demand by so many companies in our socio-economic context.

Standardization can also be related to the damaging influence of governance by market forces and competition. According to Dominique Boullier (2013), Professor of sociology at Sciences Po, Paris, MOOCs are market-driven in the first place with venture capitalists interested in the brand offensive (Stanford behind Cousera and Udacity and now other prestigious universities) and thus, these courses tend to tackle a pedagogical problem with a very specific economical alternative based on a standardisation process. The author recommends the opposite approach: that designing tomorrow's education should not be massive and formatted but distributed and collective. Paradoxically, standardisation seems to him all the more inevitable as universities from the south and even most universities from the north will not have the means or even the desire to enter the so-called global competition.

In this market-driven trend, MOOCs are said to be contributing to the shift towards students becoming consumers of higher education (Granjean, *op.cit.*), testing before selecting and engaging in various courses, dropping out whenever bored or dissatisfied with the 'product'. This statement should be qualified in the French context, however, where only a few students have enrolled up to now. Interviewed by Pauline Raud, for digiSchool média, Alain Mille (2013), Professor at Lyon 1 University, project manager for MOOC, points out that students are not the main protagonist in MOOC consumption (about 10% in terms of registration); the 30-45 age group are those who have most involvement in this form of learning. This confirms that MOOCS now give access to knowledge which was formerly confined within institutions.

3.3 Epistemological and political implications

Educational technology always seems ripe with promise but can technology in itself improve and enrich learning? Could the MOOC technology empower higher education teachers to design more engaging and efficient courses? What are the consequences of this digital trend for higher education institutions?

In a thought-provoking paper, Bernard Stiegler (2013), French philosopher and head of the Institut National de l'Innovation, considers that the digital metamorphosis of knowledge and its teaching (a new episteme) can only be achieved in close and explicit conjunction with a meaningful research and innovation policy. The principle aim of such a policy would be to explore the epistemological future of disciplines which should be equipped to cope since digital technology changes knowledge dramatically. Therefore research and digital studies should come first and serve as a basis to design and develop new forms of teaching and learning.

For Bruno Latour (2014), scientific director, Sciences Po Medialab Paris, some of the skills and functions of university are becoming completely obsolete and the consequence is a redesign of university. Indeed, the flood of data and the production of knowledge no longer originate from a unique location.

MOOCs are inspiring but they should be considered within the evolving digital landscape, which leads a reversal of the organization of learning (both temporal and spatial). We therefore agree with Michel Gaillard (2014), French researcher in physical sciences at the CNRS, when he says that the main digital concern for higher education should be to provide undergraduates with some kind of Ariane's thread, in order for them to get the keys, for, without them they will be lost in the abysses of the web, of knowledge gathered over centuries. In the absence of a search mode in this labyrinth, we are running the risk of a 'lost generation'.

Whether MOOCs represent a passing trend or are here to stay, they have the merit of generating new debates on the integration of digital technology: we are thus under an obligation to think differently about education (Stiegler, *op. cit*). This leads us to the remark that MOOC should be put back in its place, *i.e.,* that of a digital technology, a pathway among others to education. Attention should thus move from cutting edge ed-tech innovation to meaningful ways to integrate research-bases technological design into culturally and linguistically specific course content.

4 Conclusion

The effects of MOOCs on higher education are hard to measure and data about the phenomenon are still inconclusive. Yet, the study has shown that, although common threads can be found in the responses that emerge in the introduction and maturation processes of the MOOC phenomenon, contextual and cultural factors detected in discourses should be taken into consideration when addressing issues related to technological innovations. A major limitation to this study lies in the fact that the majority of the corpus investigated for this study can be considered as very committed speech and therefore biased. The sequel of the investigation is expected to be more varied since it will include an analysis of research data from the academic world at large.

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THE DEMOCRATIC PARADOX: CITIZEN OVERSIGHT OF PARLIAMENT AND ITS UNINTENDED CONSEQUENCES

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Keywords*: transparency, ICTs, parliament, democracy, Israel*

Abstract: *In this paper we explore what we term the "democratic paradox". On the one hand citizen sousveillance, or oversight of parliamentary activity, supported by ICTs as a dissemination mechanism, is generally seen in a positive light within the research related to democratic theory. Indeed, Pierre Rosanvallon (2008) sees this as one of the defining characteristics of contemporary democracy. The authors take a contrarian approach to the common theoretic wisdom and claim that while citizen oversight is beneficial and positive in a narrow sense, in its wider context this oversight and transparency has a severely detrimental effect within the wider context of contemporary democracy. The authors analyze the paradox via the Social Guard website, devoted to the transparency and oversight of the Israeli Knesset (parliament). The negative impact of the Social Guard is further exacerbated and amplified (Agre 2002, Toyama, 2011) by dissemination of findings and reports over the Internet, social media and its attendant mobile application.*

1 Introduction

Since Ithiel De Sola Pool's (1984) seminal work *Technologies of Freedom*, political and social scientists have stressed the potential of ICTs to contribute to modern liberal democracy and to help cure its various ills (for example Abramson, Arterton and Orren, 1988; Negroponte, 1995; Dertouzos, 1997; Schwartz, 1996; Rheingold, 1993; Grossman, 1995; Kamarck and Nye, 1999). Most of these potential contributions are focused on the centrality of information for political life in liberal democracies and the contribution of ICTs to political participation and mobilization. While it is beyond the scope of this paper to deal in depth with the role of information in general and the role of ICTs in particular within liberal democratic theory it is important to present a baseline for reference and as background for our treatment of transparency and oversight. Bobbio notes that liberal democracy assumes that citizens, "once they are entrusted with the right to choose who governs them", and are sufficiently well informed "will vote for the wisest, the most honest, the most enlightened of their fellow citizens" (Bobbio, 1987, p.19). Jurgen Habermas shows us how social forces gradually replaced a political system "in which the autocratic ruler's power was merely represented *before* the people with a sphere in which state authority was publicly monitored through informed and critical discourse *by* the people" (Habermas, 1989, p. xi). At the core of these approaches lies the importance of unfettered access by citizens to information related to politics and policy. The White Paper on Open Government (Great Britain, 1993) for example makes this position quite clear:

> *The Government believes that people should have the freedom to make their own choices on the important matters which affect their lives. Information is a condition of choice and provides a measure of quality. Even where there is little effective alternative to a public service, information enables citizens to demand the quality of service they are entitled to expect and puts pressure on those running services to deliver high standards* (Office of Public Service and Science, 1993, p.7)

The phenomenon of watchdog or oversight groups has grown dramatically over the last decade. The primary purpose of these groups is to provide a high degree of transparency to the workings of government, and in particular, national parliaments. According to a 2011 report authored by Andrew Mandelbaum for the *National Institute for Democracy* and the *World Bank*, over 190 different groups are active in more than 80 parliaments worldwide. These organizations are composed primarily of concerned citizens who believe that allowing the average citizen "presence" within the walls of parliament will serve to increase public awareness and return the reigns of power to the public. The Internet, together with cable television, mobile apps and other ICTs serve as the primary conduits of this access. Among the intended consequences of this high degree of transparency – beyond that of informing the public – is to increase political participation in its myriad forms and to expose the workings of the political system to the public at large.

In order to achieve a greater degree of transparency *vis-à-vis* the public, these oversight or sousveillance groups generally document, follow, and make public parliamentary activities in order to contribute to a better representative democracy and to restrain or limit the control of lobbies and interest groups of the discourse and deliberation within parliamentary committees and plenums. Within the basic operational values of these organizations one can generally find the belief that the mere presence of citizen overseers within parliamentary meetings and the documentation of parliamentary activity has a beneficial affect on elected officials and contributes to the democratization and transparency of these organizations. (Humphreys & Weinstein, 2012).

The growing strength of parliamentary watchdog and oversight groups is part of a larger phenomenon – based on the widespread belief that the political echelon no longer adequately represents or is responsive to the public, while the distance between them and the citizenry is greater than ever before (this can be seen clearly in the social protests that took place in Israel, Europe and the US over the past three years, and to a certain extent in the so called Arab Spring). This sense of alienation from the "political" is reflected in the decreasing trust on the part of the public towards political institutions in general and parliaments in particular (Schmitter, Della Porta, and Warren, 2010). To this one may add low voter turnout in many of the established democracies (Inglehart, 1999). This sense of alienation and lack of participation on the part of the public towards the "political" and the distrust of democratic political institutions is a result of a number of factors among which one may note social, political, economic and technological change.

At the base of this phenomenon lays increasing privatization and commercialization of political and civil spaces (Schudson, 2007); the growing con-

trol of interest groups and commercial interests of the public sphere (Habermas, 1989); dearth of substance in political communication amplified by populism (Blumler and Cavanaugh, 1999; McNair, 2007); personalization of politics and the political process at the expense of substance (McNair, 2007); globalization and the marginalization of the nation state; the collapse of political parties (Schudson, 2007); the failure of ideologies to mobilize and unify large groups of citizens (Azmanova, 2004).

In light of the evidence of the decreasing stature of democratic institutions and the loss of public trust in them, it would seem to follow that the active involvement and participation of citizens in political life and the expansion of circles of involvement is the natural solution to these problems, necessary in order to re-establish public trust in political institutions. Much of the current research focusing on the challenges and the crises of democracies views the expansion of participation and the active involvement of the public as the primary remedy for what ails democracies today. The democratic crisis is seen not as a crisis of the democratic ideal but rather as a structural and institutional crisis or deficit; structures and institutions need to adapt to the socio-political realities of the 21st century – democracies need to be more attentive to the publics that compose them (Canovan, 1999). In order to achieve this, the "democratic paradox" – public support of the ideal of democracy contrasted by severe loss of trust in existing procedures and institutions – must be overcome (Rosanvallon, 2008).

2 Citizen Oversight of Parliament

The growth and increasing popularity of sousveillance groups focused on the day to day workings of parliaments around the world and their ability to impact on the public discourse and to reach wide publics has been made possible primarily by the rapid expansion of ICTs and new media, particularly social media (Bimber, 2000). The Internet plays a central role in enabling these groups to mobilize activists, to raise funds and to disseminate their reports, findings and critiques among the public with relatively few material resources. In fact, activities such as these would have been practically impossible prior to the proliferation and power of social media. ICTs provide activists with the ability to collect information, disseminate information, dialogue, coordinate action and lobby decision makers at a relatively low costs (Denning, 2001). Civic activity as reflected in these networks is seen in the research on democracy in the digital age as an excellent example of the power of citizens today. The Internet allows citizens to communicate easily, representing a paradigm of "many to many" communication as opposed to the older model of "one to many" or the top down political broadcast. The Internet lowers the bar for more wide spread participation while lowering the costs of mobilizing people to action (Bailer, Bodenstein, and Heinrich, 2008). Projects such as these tend to strengthen the utopian approach which views the Internet as a powerful means that will change societies and regimes and contribute to a more open and democratic society, more transparent with wider and more significant participation (Tolbert and Mossberger, 2006).

The case of citizen parliamentary watchdog groups (working within parliaments, following parliamentary activity and reporting these to the public while exposing issues that might otherwise be hidden from public scrutiny as well as workings of parliamentary activities and elected representatives) serve as a fascinating study in attempting to better understand the role of the Internet in citizen empowerment and the creation of a more open and democratic political system.

In this paper we have chosen to focus on the *Social Guard*[1] of the Israeli Knesset (parliament) as a test case that shows that in spite of the good will and intentions of all those involved, and in spite of their relative success in mobilizing citizens previously alienated from the political sphere in general and the workings of the Israeli parliament in particular, these organizations actually have a detrimental effect in the form of "*unintended consequences*" and may very well serve to actively weaken institutional democracy. We posit that citizen based watchdog or sousveillance organizations that monitor parliamentary activity are beneficial and contribute to the improvement of democracy only in a very narrow way while at the same time are detrimental and harmful to democracy in a wider sense. These groups *unintentionally* feed the growing gap between the internal sphere of democracy and the outer sphere of democracy. Our review of the *Social Guard* and its use of ICTs is drawn from a broad based analysis of the website – the entire website was read over a period of three months, as well as its Facebook account (Twitter, though used by the *Social Guard*, is not popular in Israel).

3 The Double Edged Sword of Transparency

As opposed to the prevalent argument in democratic theory *vis-à-vis* citizen participation and wide spread public involvement in policy setting as a possible danger of populism (Taggart, 2002), the issues we seek to raise here do not touch upon the tension between democracy and populism. The purpose of this paper is *not* to show that an increase in public participation is a danger to the quality of democracy, or that intense political activity by citizens is a sign of dysfunction among political institutions reflecting a need for reform in order for the polity to regain control. Rather, the purpose here is to show that meaningful and substantial political activity mediated in a large part by technology has the *unintended consequence* of weakening democratic foundations.

This is a disturbing claim in that it raises deep questions regarding the viability of creating a model of representative democracy along the lines of widening public sousveillance in an age of distrust, as suggested by the democratic theorist Pierre Rosanvallon (2008) in his important work *Counter-Democracy: Politics in an Age of Distrust*. Rosanvallon claims that democratic systems are not in a process of change but have already changed. Rosanvallon does not see in the growing distrust of the public in democratic institutions an expression of apathy and disinterest but rather quite the opposite – a sign of growth and maturation. What Rosanvallon calls greater "social attentiveness" by citizens.

1. See the Social Guard web site, http://hamishmar.org.il/about-us-2/

Rosanvallon suggests that the classic model of democracy is by definition based in the distrust of the public and on the need to weaken political leadership in order to prevent them from acquiring too much power. In his book, Rosanvallon notes the rise of a different kind of democracy, one that emphasizes the power of citizens to veto government decisions matched by the ability of the public to judge its representatives. Accordingly, distrust serves to empower the role of citizens requiring them to closely monitor government activities and the processes of policy setting and decision making. According to Rosanvallon, democratic society can no longer be based on the myth of the sovereignty of the people and that democracy can only be based on the belief of the public in its own abilities and possibilities for resistance and to have their voices heard, even if only partially. Rosanvallon notes three mechanisms whereby citizens can hold their rulers accountable between elections and independent of their results: oversight; prevention; and judgment. Each of these may have effects for the quality of democracy, he argues, and while not novel, they have all been expanding and diversifying precisely as the more traditional forms of representation have declined in significance. Rosanvallon's central hypothesis is that "...the inability of electoral/representative politics to keep its promises [has] led to the development of indirect forms of democracy" (p. 274). But resistance and oversight *can not* serve as a stable foundation for a regime, because even if the road that contemporary democracy is taking echoes Rosanvallon's analysis, a democracy based on acute distrust is doomed to fail miserably. Distrust can be a positive tool as long as it maintains a constructive dimension – beyond this it serves as a significant danger to any democratic mechanism and threatens not only its viability and ability to function but its very ability to exist.

Thus, paradoxically, while the important and positive activities of citizen oversight within the narrow framework of the parliament indeed serves to improve its functioning, contributes to its efficiency, highlights failures, stands against lobbyists and special interests, while providing the public with insight to legislative procedure, at the same time it creates significant damage to the wider framework of the democratic system. We explore this paradox in the following sections.

In this paper we make five primary claims: 1. The activity of the *Social Guard* in the Israeli Knesset does not contribute positively to the understanding of the wider democratic framework among the public at large, but rather weakens it while increasing distrust in the government and its institutions. 2. The group's activity does not empower democratic processes but rather increases inequality among the different sectors of society. 3. The activity of the *Social Guard* places an emphasis on the personal dimension of elected officials, thus reinforcing existing attitudes of politics as personal, based on ego struggles, power, interests and conflicts of prestige while weakening the essential, philosophical and ideological aspects of politics and democracy. The principle of transparency is represented voyeuristically and emphasizes exposure of the elected official – in many ways mirroring aspects of reality television, thus minimizing the less visual – and perhaps more crucial – important aspects of parliamentary work. 4. Furthermore, reports produced by the *Social Guard* measure quantitative aspects of elected officials, forcing members of Knesset

(MKs) to produce quantity over quality, with an emphasis on visibility that at times has a negative impact on the workings of parliament as well as wider democratic mechanisms. 5. The activities of the group enforces an apolitical perception of parliament undermining the most essential principles of democracy as a struggle over questions of identity and the common good.

Below, we will attempt to describe this paradox, wherein the goal is worthy, effects are often positive, the expansion of the involvement and participation of ever larger publics is welcome, but at the same time, in the context of the wider democratic sphere, the results are at times devastating to the fine weave of democracy, further weakening and unraveling a polity already in crisis. Is this part of a process in which democratic regimes will be forced to radically reinvent themselves or is this simply part of the process of change that we should get used to? We return to these questions later.

4 The "Social Guard of the Knesset"

> *"Israeli citizens have discovered that regardless of political views, they all share a grim reality:*
> *a. Our government has systematically divested itself of many of its traditional responsibilities, such as health care, education and welfare. Many services have been privatized, and even those who support this policy find that it has been carried out in harmful ways. Education is on a steady decline, a spectacular public health care system is collapsing, welfare projects are severely under-funded.*
> *b. The cost of living is outrageous, with a handful of monopolies controlling our market. It is generally agreed that there is a serious problem of centralized control by a few omnipotent players.*
> *c. Our democratic system is being corroded by different groups and interests, which use the Knesset as part of an overall campaign to curtail civic rights such as freedom of speech, freedom of assembly and so forth.*
> *d. The government is leading an ongoing campaign to curtail the powers of the legislative and judiciary branches. It should be noted, that these are fairly unaccountable, since elections are national, and there is no direct mechanism which enables voters to keep in touch with their representatives"*[2].

The "*Social Guard* of the Knesset" was established following the social protests in Israel, as in other countries, during the summer of 2011. Public dissatisfaction was translated into mass demonstrations, including the occupation of public spaces by citizens in a number of Israeli cities. The protests eventually faded, but a number of civil society organizations were established by citizens refusing to allow the "spirit" of the protests to fade. These citizens felt that the ideas expressed by the public should be translated into action. Among the many groups that were formed, the *Social Guard* is one of the largest and more

2. From the English language version of the *Social Guard* Website (http://hamishmar.org.il/16101-2/needed/) Retrieved 8 March, 2014. It is informative that this description only appears in the English language section of the site. We surmise that it is intended for fundraising purposes.

significant, receiving a great deal of public attention. Activities of the *Social Guard* are primarily web and social media based. Any citizen can register via the website or mobile app for a day of activity at the Knesset, the organization facilitates access to the Knesset for those interested and participants are required to summarize in writing their experiences as well as upload these experiences to the group's website. Over time the organizations' methods have become more sophisticated and its volunteers are provided with tools and suggestions on how to act when visiting the Knesset. For example, how to follow parliamentary meetings and committees as well as how to document these. The website (https://hamishmar.org.il/) a Facebook group (https://www.facebook.com/mishmarhevrati), Twitter account (@hamishmar) and a YouTube channel (https://www.youtube.com/user/HamishmarHahevrati) serve as the primary channels for dissemination of information, mobilization of the public and of course, fundraising. The group does not stop at simply monitoring and reporting of Knesset activity but also attempts to advance legislation – such as shortening the summer recess of the Knesset.

In the summer of 2013, the *Social Guard* published a book (Hamishmar Hahevrati, 2013)[3] highlighting its activities, bringing forth the evidence of its volunteers' experiences in the Knesset, in particular the parliamentary committees and the Knesset plenum. In spite of the fact that our initial reaction as veteran political scientists to the oversight initiative was that it was welcome, positive and seemingly effective, the more we read the reports on the group's website, its Facebook page, and in the book itself, a sense of disturbing discomfort began to creep in, raising significant and difficult questions as to the contribution of this flood of information to the democratic discourse in general, but more specifically, to the kind of democratic vision hidden behind the activity. What follows is an attempt to answer these questions and those raised above.

4.1 Weakening of political system and loss of trust

> *"I spent three hours in the Knesset Finance Committee this morning. Everyone knows that this is a very important committee, a hard working committee. What is decided there directly effects the pockets of everyone in the country, and the pockets of special interests – whoever they may be. But what I saw in the committee that morning was not work.* **It was three hours of bullshit"** Daniel Dor, Social Guard volunteer, Knesset Finance Committee, 7.5.13

> *"Every week, volunteers of the Social Guard witness how the Knesset is being weakened, concerned with the executive branch's stranglehold of the parliament via the Minister's Legislation Committee. We will continue to*

3. (In Hebrew) See here a direct link to the book http://www.scribd.com/doc/194802184/%D7%A1%D7%A4%D7%A8-%D7%94%D7%A2%D7%93%D7%95%D7%99%D7%95%D7%AA-%D7%9E%D7%95%D7%A9%D7%91-%D7%90%D7%91%D7%99%D7%91-%D7%A7%D7%99%D7%A5-2013

monitor its activity". From the introduction to the annual "Social Index" of the Social Guard, 26.3.14

Most of the oversight work in the Knesset and committees, indeed in any parliament in the world, revolves around minute details, "grey" and boring work done far from the public eye and the media. The volunteers of the *Social Guard* come to monitor the workings of the Knesset. Going over the published reports and posts on the website, one can often find positive evaluations of the work done by some of the MKs. One can also find consternation expressed by the volunteers of the guard, at their own partial understanding of the material and their attempts to raise questions and not to act as rubber stamps. But while poring over the published reports we found to our surprise that the highlighted examples, those at the forefront of the web site and Facebook pages, and in the yearly summary of activities, are those examples, which, for the most part, represent the negative aspects of MKs parliamentary performance. The lack of seriousness on the part of MKs, shoddy work, the political wheeling and dealing. Headlines and titles given to posts are generally negative as well. Only a very few of the positive examples are highlighted. More so, if there is a common thread that can be tweezed out in these reports it is that there are actually quite a few serious and hardworking MKs but the Knesset of today is weak in relation to the past, and lacks the tools and support to stand against the executive branch and commercial interests. Thus, perhaps without intention, the Knesset which enjoys more oversight than any other state body (certainly more than the other branches of government and particularly the military and the security services), is significantly weakened and continues to lose public trust. Within this vicious cycle, a result of this growing weakness and loss of public trust, the Knesset is less capable of dealing with other bodies whose water is certainly murkier than theirs. The public overseers, on the one hand, gain a greater understanding of how the legislature works, understanding the complexity of the challenges it faces, contribute to the discourse and deliberations and even raise questions, yet of all this important work the picture that is portrayed before the wider circle, e.g. the public, is an extremely negative one, drawn in dark colors, serving only to feed the despair, actively contributing to public distrust in its representative body – for example, a joint 2013 poll[4] conducted by Haifa University and Ben Gurion University places both the Knesset and MKs at the very bottom (23 out of 23 and 32 out of 32, respectively) of a list of public institutions in terms of public trust, with similar trends evident in most liberal democracies. Margetts (2011) suggests that increased transparency may lead to reduced levels of trust, feeding the alienation between the public and the political system, while casting suspicion on policy making practices. This is supported by empirical data from Holland, where an experiment into the impact of ICT-enabled transparency in Dutch local government showed that while more transparency increases citizens' perceptions of benevolence and honesty of government, it actually reduces their perceptions of competence, thereby lowering levels of trust in government agencies[5].

4. Results of the poll may be found here (Hebrew): http://wordpress.haifa.ac.il/?p=4440

5. The experiment is reported in S. G. Grimmelikhuijsen, "Transparency of public

Grimmelikhuijsen (2010) refers to the negative aspects of his findings as the dark side of transparency – a result of a demystification of both government process and performance. These findings are echoed and expanded upon by Bannister and Connolly (2011). By highlighting – via the web, Twitter, and Facebook – the negative aspects of parliamentary activity, the *Social Guard* would seem to contribute to the degradation of public trust, not the opposite. In this sense, ICTs amplify (Agre 2002, Toyama, 2011) these negative trends.

4.2 Increased inequality in access to centers of power

> *"In summary, there are no great revelations, but there is a promise which we must continue to follow. We, the Social Guard, we, the public, must make sure that the promised hearing will be public and will touch upon, in a real way, the most difficult issues".* Shani Goldberg, Social Guard volunteer, Knesset Finance Committee.

> *"I had a great deal of difficulty following the debate in the joint committee [regarding the institution of a biometric database of Israeli citizens] as it was very technical and legal. As a result, I wonder if even the MKs that participated understood the debate. I doubt that the MKs will even bother to go into the details in further debates in spite of the importance of the topic. The biometric pilot phase will be instituted with very little discussion and almost no oversight as a result of the shoddy work of MKs who did not even bother to appear in committee, let alone the plenum".* Anat Eyal, Social Guard volunteer, Knesset Joint Committee discussion of the biometric database.

The Internet and ICTs, as noted in the beginning of this paper, are seen in a rather utopian light as affording tools to the public that serve to fill the deficits of traditional media, allowing a wide range of citizens, from different backgrounds and socio-economic status to take part in political life, to be involved and contribute to policy setting, decision making and legislation. The challenge of the *Social Guard* in this instance is no different than the challenges facing other civil society organizations seeking to act in the political and public arena and to serve as a voice for the public(s) seeking to take part in political life, not abandoning this sphere to the hands of lobbyists serving special or commercial interests, or even stronger, more well funded and more powerful interest groups (Bartels, 2009). Yet any democracy that stresses the involvement of civil society, based on the ever growing system of civil oversight of political institutions, only widens the gap between "strong" citizens and the weaker sectors of a society (Coleman and Blumler, 2009, p. 136). In the past, mass parties, by definition, served to represent a multitude of interests – ideologies, interests, classes, ethnic and religious groups. Yet with the waning influence and importance of political parties – tending today more towards single issue politics or narrow and sectoral interests – these already weak and disenfranchised publics are made more so (Dalton and Wattenberg, 2002).

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Civil society organizations that support democracy and democratic values yet express deep seated distrust towards the activities of political institutions only serve to further weaken them. Thus, according to Dalton, the problem is not distrust in democracy, but rather in its *modus operandi*. Unfortunately, the distrust in political institutions expressed and amplified by oversight groups serves to impact negatively on deep democratic values such as representation and equality. Lacking equal representation and any real ability to take part in political life the gap between those that are involved and those that aren't simply widens (Berry, 1999). Furthermore, as long as ICTs continue to serve a particular sector of society, no matter how wide it appears to be, the remedy is not to be found there. Even today, significant sectors of society are severely under-represented on the Internet.

Civil society, in spite of its pretense of representing the public actually only serves a small subsection of any society. If in the past, party research dealt with the difficulties of political parties to advance political agendas or adapt them to the needs of their publics following elections, the rise of civil society organizations as a serious mediator of interests makes matters even worse in that these groups are far from representative and are not even a shadow of mass parties. Civil society organizations are almost by definition single issue organizations – i.e. they tend to represent very narrow and well defined interests – as opposed to mass parties which function primarily as aggregators of a multitude of interests.

Part of the problem is of course a more complex political and social reality, requiring high levels of specialization, thus increasing the involvement of highly specialized interest groups in the legislation process and parliamentary deliberation (Mancini, 1999). This necessity creates an additional, even more severe problem – the further distancing of the public from the process of decision making or even impacting on the public's ability of understanding and following the process.

Parliamentary oversight organizations are active in parliament for all citizens – in this role they are seen as trusted and authentic representatives of the public at large. As such, the public tends to imbue a high degree of trust in these organizations, and attach a great deal of importance to their activities in parliament – even if the analyses provided by them and their world views are significantly different from those of the public.

4.3 Citizen oversight emphasizes the personal dimension of elected officials at the expense of the ideological dimension

> *"I am positive that there are lots of aspects that I did not understand here. Motivations, political deals, personal whims, power struggles, procrastination tactics, and lots of emotion. But I did understand one thing. This is how things are done in the Knesset. Games and mistakes, strategies and politics. This is important to remember and to internalize".* Bat Sheva Hartman, Social Guard Volunteer, 18.7.13.

One of the significant aspects of the media in general and ICTs in particular in what Blumler and Cavanaugh (1999) have termed the "third age of political communication" is the personalization and visualization of politics and the political discourse (Bennet, 2013). While this may have some value in terms of accountability – awareness of the camera, the presence of citizen overseers and the recognition that politics can no longer be conducted completely in the dark, away from the prying eyes of the media and the public – this same emphasis on personalization contributes to shallow political discourse, making it more personal and person oriented as opposed to "idea" oriented, thus creating a discourse focused on personal interests or the personality of an elected official. Of course, oversight groups have nothing to do with initiating this phenomenon – political advertising can take credit for the rise of the image in political communication (McNair, 2007). The process elevates the personal dimension, focusing on personal attributes of public officials or candidates. In an age where ideology plays an almost non-existent role, the personality and image of the politician is a central factor in public trust and in mobilizing public support. Thus, image management has become the end all of political communication (McNair, 2007). With the technological advances of recent years, it is easier for an individual politician to reach out to the public directly without mediation over the Internet and social media – indeed entire campaigns are built on this ability. This "new visibility" (Thompson, 2005) as noted by Thompson, is a double edged sword – just as this visibility can lead to a meteoric rise in power, so can it end a political career just as quickly on the basis of one scandal or slip of tongue. Instead of basing the decision making and policy setting process on discussion and deliberation and well based positions it is based on exposing political actors, shaming them or raising them to fame (see for example Sarah Palin and George Bush). Within this reality of new visibility, oversight organizations make use of the same tools to expose, shame and embarrass, or praise politicians (Dete, 2013). In the Israeli context there is a tendency to attack politicians who vote against their own, known, preferences due to coalition discipline (in which individual ruling coalition members of parliament are forced to vote in line with party discipline whether or not they agree with a specific policy). This serves as another example of imposing a type of oversight regardless of the specific rules of parliament. This is clearly expressed by Boaz Rakutz, General Manager of the *Social Guard* who published a brief post on this following the passage of the controversial Governance Bill in the Knesset Constitutional Committee in March, 2014: "In the present Knesset the ability of MKs to vote independently has been severely restricted. The Knesset Independence Index, recently published by the *Social Guard* shows that the independence of MKs has been substantially reduced as a result of coalition discipline and the work of the Minister's Committee on Legislation". Another example may be found in comments by *Social Guard* volunteer Esti Segal: "The claim that MKs are not responsible for election promises due to coalition discipline pulls the rug out from under the democratic ideal".

The question of the degree of independence of MKs *vis-à-vis* coalition discipline is of course an important and legitimate question. But presenting the issue in the framework of the personal responsibility of MKs while at the

same time portraying MKs who adhere to the rules of coalition discipline is cynical and reflects a lack of understanding of the political rules of the game. This feeds the negative view of MKs among the general public who are not necessarily aware of these nuances.

The testimony of volunteers presented by the *Social Guard* reflect an emphasis of the personal dimension and the behavior of MKs and how they voted. The titles attached to the posts also single out Ministers and MKs in a negative light. On the one hand, as noted above, this visibility and exposure can be an important and effective tool, impacting the way an MK behaves, challenging them or enforcing democratic norms. On the other hand, as a result of various institutional pressures, the way a parliament works, and the removal of actions from context matched by an emphasis on the personal, we are presented with a problematic political reality which further feeds greater distrust of the system at large.

4.4 Quantity vs. Quality

Quantitative indices have become a tool of ever increasing importance used by oversight groups in the framework of personal emphasis and exposure. Not only are the quality of deliberations and discussions described and recorded, but much of the activity of the parliament in general and MKs in particular are described in quantitative terms, published yearly in quantitative indices. How many voted, how many were present, how many support social agendas, how many abstained, etc., are converted into quantitative grades given to MKs. These are of course reflected and amplified in the traditional media via headlines along the lines of "MKs who spent the least time at parliament", or spent the most time abroad, or missed the most number of sessions. These in turn impact on public opinion regarding specific MKs and on the system as a whole. The quantitative dimension, much like the personal dimension discussed above has certain value. Yet this approach primarily emphasizes the more technical aspects of parliamentary work, ignoring the more fundamental and essential aspects. Quantitative indices contribute to the shallowness and superficiality of political discourse; ignore the broader and more substantive contexts, regime structure in Israeli society and institutional constraints, such as election method. The subordination of democratic principle to quantitative indices translated into grades strengthens the perception of political institutions as service providers and citizens as clients. This can have a perverse effect on conceptions and understanding of democracy and citizenship, reducing them to mere quantitative values lacking depth and meaning.

4.5 Perception of oversight activity as apolitical

> *"It is not surprising that this is the way the summary of a deliberation of 30 minutes looks because 'that is the scheduled amount of time', in spite of the fact that not all speakers managed to fully present. In my eyes, a topic that touches on the day to day hardships of people [stuck in immigrant absorption centers for 10 years] deserves more than 30 minutes of deliberation in the Knesset, with a more serious approach matched with possible solu-*

tions on the part of MKs". Gal Keisar, Social Guard Volunteer, 24.12.13, The Knesset Committee on Immigration and Absorption.

Politics in a democratic society is based on the struggle between opinions and ideas, it is based on the notion of which communal public good is more worthy of support and advancement. Politics, by definition, is a struggle over the division of finite public resources. Along the lines of these struggles elections take place every few years in an attempt to decide which options to support, which policies to advance and which policies to reject. These struggles are not limited to elections – these struggles over social and political issues continue on a daily basis during the process of legislation and policy. In spite of the fact that the *Social Guard* has a clear world view representing social values stressing the responsibility of the state to provide welfare services, health services and education, a safety net for all of the states' citizens, it claims to maintain an "apolitical" stance. The activity of the *Social Guard* as expressed in its website, its activities and publications is portrayed as apolitical. A sort of heroic struggle of citizens against a regime apathetic to the woes of the public, a regime isolated from the people. The *Social Guard*, drawing on popular support, in contrast to the popularly elected Knesset, sees itself as the true and authentic *vox populi*, more representative of the will of the people. The website stresses that the *Social Guard* has no idea as to the political stances of its volunteers, which in any case is seen by them as irrelevant. What drives the *Social Guard*, by its own testimony, is simply concern for Israeli democracy and the advancement of social concerns unrelated to political questions of left or right. The attempt by the *Social Guard* to distance itself from politics, to portray the activity and the organization as apolitical can only lead to further distortion of the concept of what is political, both within the organization and among the many citizens who support its activities and identify with its goals. By distancing itself from the political the organization discredits politics much in the same that it is harmful to the democratic concept.

5 Conclusion

A sound democracy requires working, responsive, and vibrant institutions, active citizens, public engagement, transparency of public activities and accountability. There is no question regarding these fundamental values. We are well aware of their importance in creating better political institutions and fostering more open systems of decision making and policy setting, allowing as many people as possible to take part in political life and to attempt to influence society. In spite of this and quite surprisingly, one can see, following the logic of the arguments presented here, how the dynamic of organizations, social networks and political institutions have a life of their own that does not necessarily lead to a desirable end game if the there is no inclusive thinking regarding the meanings and implications of political activity. Further research, preferably comparative, is needed in order to better understand the scope and implications of the paradox across countries. The lack of a deep and inclusive approach to political action, amplified by the mass media and ICTs (Agre,

2002) can have unintended and often disastrous consequences. To this we can only add by way of conclusion and warning: *caveat actor*.

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A REFLECTION ON DESIGNING LOW-END INTERACTIVE PRODUCTS FOR RURAL USERS IN SUB-SAHARA AFRICA

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Keywords: *Low-end users, developing countries, usability, ethnography, participatory design*

Abstract: *One of the most widely used interactive products by non-western users in developing countries is the mobile phone. Further, the mobile phone market in western countries is rapidly getting saturated (IDC, 2013). It is therefore likely that the market for the next billion mobile phones is among low-end users in the emerging economies. However, to design effective mobile phones or low-end portable technology for these radically different users, research indicates that first, ethnography and ethical participatory design methods need to be used in the design phase and second, in the usability testing phase, current usability evaluation methods need to be adapted and possibly develop new ones that are more appropriate. Through our research in the adaptation and design of interactive technology for Kenyan farmers we illustrate how these suggestions can be put in practice. Sites like the Kenyan one we refer to have now become places of local and global negotiations, where the key insights are not so much focused on local needs but on new ways in which modernity unfolds.*

1 Introduction

For a period of three years from 2006, the Sociotechnical Centre for Internationalisation and User Experience (SCIUX) at The University of West London carried out research that considers how to design and evaluate the usability of interactive products for users in a developing country's context. Our research suggests that mobile phone users in developing countries can broadly be categorised into two (i) the high-end-users, whose mobile phone needs are very similar to those of western users and (ii) the low-end-users, who are a radically 'different' type of user with 'different/unique' mobile phone needs. These users are set apart not only by their low literacy levels, cultural factors and different context of technology use but also by their environment that is characterised by poor telecommunication infrastructure. Consequently, they have a unique user needs and require unique interactive products. Our research further suggests that to design useful interactive products for these low-end-users designers need to use participatory design and ethnographic methods. This user involvement needs to be incorporated even in the evaluation of the interactive products usability. SCIUX previously published research (see Abdelnour-Nocera et al,. 2011) suggests that either new Usability Evaluation Methods (UEMs) are developed or current ones be adapted to suit low-end-users from emerging economies.

1.1 Low-End Mobile phones and Consumer Devices in 'Developing' Countries

The mobile phone has successfully penetrated the emerging economies (ITU, 2014). This success was initially achieved by Nokia, who introduced their own low cost model, specifically made for the developing and emerging economies. The features of the Nokia 1100 model included "anti-slip sides to provide a better grip as well as reduce the risk of dust and rain damage," a "display. . . and keypad layout [that] makes the phone intuitive and easy-to-use," a flashlight, and a "long lasting battery [that] gives users a talk time of up to 2 hrs to 4 hrs 30 mins and a standby time of up to 400 hours,". This Nokia 1100 model was so successful that it sold 200 million units sold, earning a world record as the best-selling consumer electronic device ever (Murph, 2007).

The Nokia 1100 model has since been discontinued and it seems like the next wave of mobile phones for developing and emerging countries is that of 'feature-rich' mobile phones. These would be mobile phones that have features that are specific to the users in the emerging markets. Further, these 'feature-rich' mobile phones would need to be targeted at low-end users whose mobile phone market remains unsaturated.

A good example is the feature for electronic payments developed for phone like the Nokia 1100, M-Pesa (Donovan, 2012). This solution shows how this population incorporates these devices into their ways of living. How to design and develop features phones or low end mobile technology, which would be often offline, poses important challenges.

There is another strand of our research at SCIUX that has also explored the use of offline open source handheld devices in English teachers in primary schools in Nepal (Shrestha et al., 2011). In doing this, we have looked for a solution that might be sustainable, scalable and work while identifying the implication of introducing a new technology in such a resources-constrained environment.

In the light of clear innovation potential in markets with resource constrained environments and platforms, the category of 'developing' country is no longer fair and useful as a way of framing design scenarios and possibilities,. In these new contexts like the Kenyan one, we find new sites of local and global negotiations, where the key insights are not so much focused on local needs but on new ways in which modernity unfolds (DePaula, 2013).

2 A Business Case

With the saturation of the western mobile market (IDC, 2013); it is plausible to state that the niche market for the next billion mobile phones will be among the low-end-users in developing countries. Consequently, businesses interested in harnessing the mobile phone market will have to radically alter their design and evaluation methods in order to meet the needs of the next billion mobile users, who happen to be in the developing world.

Other industries have responded to this business niche robustly. The argument for this response is strikingly captured in the concept of the 'Fortune at the bottom of the pyramid' by Prahalad (2006). He contends that "the world's

most exciting, fastest-growing new market is where you least expect it: at the bottom of the pyramid. Collectively, the world's billions of poor people have immense untapped buying power. They represent an enormous opportunity for companies who learn how to serve them. Not only can it be done, it is being done-very profitably. What's more, companies aren't just making money: by serving these markets, they're helping millions of the world's poorest people escape poverty".

Since M-Pesa's introduction in March 2007 in Kenya, the program has successfully enrolled 15.2 million users, transferred more than 1.4 trillion dollars in electronic funds, and contributed significantly to poverty alleviation and financial inclusion efforts in rural Kenya (Buku and Meredith, 2013).

3 Research Background; VeSeL

The reflections reported in this paper are as a result of research that was carried out within the context of VeSeL (Village e-Science for Life) a project which was part of the Bridging the Global Digital Divide network sponsored by the Engineering and Physical Sciences Research Council (EPSRC) in the UK. VeSeL constituted five UK universities and one Kenyan University. The VeSeL team consisted of persons with technical expertise in power engineering, networks, Internet technology, user interface design, educational technology and agricultural methods. University of West London (UWL) was part of the VeSeL UK team because of its particular expertise in participatory and User Interface Design. This research project ran for a period of three years from September 2006. The aim of the VeSeL project was to enable the rural communities in Sub-Saharan Africa to use digital technology to improve their agricultural practices, with particular emphasis upon educational barriers. Therefore, in November 2006, a group of the VeSeL UK team, made a visit to Kenya to identify potential farming communities to work with. In collaboration with VeSeL Kenya, two local farming communities were identified. These two farming communities in Kenyan are central to this reflection. Our experience outlined in the following sections highlights important lessons that we learnt in the course of designing and adapting interactive products, some of which were mobile, for these rural users in Kenya.

4 Ethnographic methods

Kambu and Kiangwachi, the two Kenyan farming communities selected to work with VeSeL were very culturally removed for the VeSeL design team. We therefore needed to not only understand these farmers, but also their way of life, their needs and wants, their immediate environment and any previous experience of technology use. A total of 10 days was spent with each of the farming communities with the aim of getting to know them more closely. The main reason for designers to take time to interact with users within the context of cross- cultural design and usability is captured clearly by Donner et al (2008; pg 40) who states:

"Perhaps the most critical factor (when westerners design technology for non- westerners) is to spend time with potential users in those circumstances in which the innovation might take hold. Spend time early, spend time frequently, and spend a lot of time … time spent with users 'in the field' is more valuable than just about anything else … the communities we hope to impact are so different from those we were raised in that our first instincts are of little help; to turn our 'subjects' into collaborators or empowered potential users, it's imperative that we establish rapport".

During the ten day period with each of the farming communities, both exploratory participation observation and exploratory participant Interviews methods were used. The following section will discuss how these two methods were implemented which will be followed by a reflection of what went well and what could be done better in the future.

4.1 Exploratory Participant Observation

DeWalt and DeWalt (2002) define exploratory participant observation as the process that enables researchers to learn about activities of the people under study in the natural setting through observation and participating in those activities. In other words, it is the process of learning through exposure to or involvement in the day-to-day or routine activities in the researcher setting (Schensul et al, 1999). According to Wolcott (1998), participant observation is founded on first-hand experience in naturally occurring events. The researcher's intention is to capture important aspects of what is being observed in a concrete manner (Hammersley and Atkinson, 1995).

In both Kambu and Kiangwachi, the aim was to spend time with the users particularly observing them take part in their daily activities. Where possible, we joined in their activities in their homes, market places and public gatherings/meetings. These very diverse opportunities of observation and interaction with the participants in their natural settings were intended to provide a rich selection of topics for discussion as well as giving the researchers an insight into the farmers' day-to-day lives. It was also clear that interacting with the participants in the comfort of their environment afforded the researchers a chance to observe non-verbal expressions of feelings, intricate details such as who interacts with who and aspects such as what amounts of time are spent on what type of activities (Marshall and Rossman, 1995). By virtue of being 'on site' and getting more familiarised with the community, the users 'reacted' less while being observed which in turn enabled the researchers to develop questions that were culturally sound (Bernard, 1994).

4.2 Exploratory Participant Interviews

These are similar to exploratory participant observations but with the advantage of being able to capture in the users own words what they see, believe and report doing with respect to a specific topic (Schensul et al, 1999). Exploratory interviews take various forms such as casual conversations, life history in-

terviews, key informant interviews and semi-structured interviews (Wolcott, 1998).

During our stay in Kambu and Kiangwachi, we mainly used the key-informant interviewing format. Persons of standing within the communities were selected and asked to tell their personal story in a process referred to as 'the power of scientific imagination to bring us in touch with the lives of strangers' (Geertz, 1973). However, before each key informant interview session, the researcher explained their background, the purpose and nature of study as well as why these informants were of interest to the study and how each one of them came to be selected. The researchers also assured the participants that the data collected was anonymous and that they should feel free to interrupt and ask for clarifications where needed (Lofland and Lofland 1995).

By spending time with the potential users in their environment, we were able to gain knowledge about the users, understand the users 'real' needs and also learn the context of use of technology which in turn was used as a guide of the development of the intended technology. Further, by involving the users in the design process the users were consequently empowered to become valued stakeholders.

4.3 Our Reflection on Ethnographically Inspired Research

It was very important to have been introduced to the farming communities by the local VeSeL partner (University of Nairobi). This local partner was well known to the farmers from previous interactions. As a result, this made the two farming communities comfortable with the VeSeL designing team a lot quicker.

Speaking the local language was important too. Although there is the language Kiswahili (national language in Kenya) that majority of the farmers could use, there were still concepts and ideas that were best described in their own native language. One of the researchers could speak the native language of one of the farming communities and this proved was very helpful.

The time spent with the users in their surroundings should be as much as is possible. However, sometimes it is not always possible to do so due to limitation of resources. The following are various strategies that could be used in future to ensure that the short time spent is valuable. We suggest the following;

- Before gaining entry into the field, draft a list of research questions that only focus on the important activities. However, Millen (2000) suggests that community informants input is very vital at this stage; therefore, on gaining entry the research questions would need to be redefined with the help of the community informants.
- Have a short list of broad topics for discussion and a more detailed list of specific 'bottleneck and benefits' (Bauersfeld and Halgren, 1996) to major the discussions on.
- Increase the speed of the different activities being carried out, substitute faster activities for slow ones, multi-task and timetable specific activities (Robinson and Godbey, 1997). This saves valuable time in the field.

- Apart from observing from a distance, get more involved in the day-to-day activities of the participants. Of course, the participants need to feel comfortable with this involvement.
- Seek to have as much conversation (with probing where necessary) with the participants as possible. This could be recorded (with the participants' permission) or written out later after the interaction. These conversations may be casual, life history interviews, key informant interviews and semi-structured interviews (Wolcott, 1998). Key informant interviews are most productive since valuable/relevant information can be obtained within a relatively short period of time.

5 Participatory Design (PD)

The approach initially emerged in Scandinavia where they considered a paradigm shift to design in workplaces – democratically involving end users in the processes of design (Floyd et al., 1989). Over the years, however, PD approach has taken many directions and orientations mainly due to the notion that a successful design needs to involve all stakeholders and not only the end users.

In ICT design for development context, for example, Dearden and Rizvi (2008) believe that there is a tendency, as participatory methods have been adopted by the mainstream to highlight issues of technique at the expense of concerns with relationships. This is particularly the case for the examination of the role of practitioners, and of power relationships within the participatory design..

Bergvall-Kåreborn and Ståhlbrost (2008) critically take a look at the practice thus far to observe the degree of motivation and types of participation being claimed to draw attention to an ethical stance in the practice. Analysing 15 articles published in the 2006 PD Conference (PDC06), they found that only three out of the 15 had an ethical/democracy perspective in practice. As for the type of participation, they found that despite all studies claiming direct end-user participation, "(i)n eight cases this includes actual end-users and in two cases it includes potential end-users since the actual users of the system developed are still unknown. None of the studies include lead-users, user-representatives, or early adopters" (Bergvall- Kåreborn and Ståhlbrost, 2008). Clearly, PD should aim towards frameworks that include the voices of end users, but also those of all other stakeholders.

In the VeSeL project, we sought to define these boundaries both at end-users and stakeholders level by studying their contexts separately. We then learnt from the context and culture of each group to iteratively define our working relationship and facilitate individual participation. This approach is also favored by Bidwell and Hardy (2009), who also found that in situating participation, especially in rural settings, methodologies should be less intrusive in practice, power structures need to be observed and time should be invested appropriately.

Once the contexts of both stakeholders and that of the end-users had been explored, the research sought to identify relevant participatory IS design theories and practices to help explain the context of VeSeL. In doing so, the

research also explored gaps that could be filled to augment and contribute to knowledge in PD. Our techniques and approaches used in the VeSeL project as described earlier, were key in ensuring participation.

Furthermore, the research progressed by adapting and iteratively applying relevant insights from one stage to another. e.g. Only after the interviews we sought to identify potential research kit, venues and research champions instead of precipitously imposing a model.

5.1 Practical Issues in the PD approach:

Given the possible difficulties of interacting with end-users of a different culture and context, it is advisable to be flexible in your timeframe for field research activities. This allows researchers to extend or move on to another activity if the conditions were not right for participants in a planned activity.

Make room for familiarisation and piloting: a level of familiarity is required for piloting activities (with volunteer participants). This allows room for improvement prior to sampling and running the actual activities. It is considered ethical to ensure participants are treated well and fairly. Activities should be used/introduced only if the situation is favourable. For instance in VeSeL, field researchers were not to introduce or evaluate a mobile phone or digital camera without prior interaction with a user to elucidate his/her perceptions, social senses and sensibilities, educational level and willingness to participate in the research.

Primarily discuss approaches and methods with local experts: discussion and initial cultural customisation serve to validate the activities in order to maximise their usefulness and success vis-a-vis the participants. In VeSeL, the local partner (University of Nairobi) had more familiarity with the culture of the targeted communities. Field researchers were to be introduced by them and after initial contacts with community leaders.

6 Usability testing

During our interactions with the farmers in their environments, we made observations that indicated that we may experience difficulties when carrying out usability evaluations. Specifically, we observed that power distance played an important role in relationships within the community. Further, we noted that face loss (see section 6.2), users previous experience with technology, gender and tribal affiliation were all important issues we could not easily overlook.

6.1 Power Distance

Power Distance (PD) is defined as “the extent to which the less powerful members of institutions (basic elements of society like the family, school, and the community) and organizations within a country expect and accept that power is distributed unequally” (Hofstede, 1991, p. 28). In other words, it is the extent to which a society prefers that power in relationships, institutions, and organ-

isations is distributed unequally. Consequently, superiors consider themselves different from their subordinates and vice versa.

According to Samovar et al., (1998) people in high PD cultures,

> *...believe power and authority are a fact of life. Both consciously and unconsciously, these cultures teach their members that people are not equal in this world and that everybody has a rightful place, which is clearly marked by countless vertical arrangements. Social hierarchy is prevalent and institutionalises inequality* (p. 71).

People from high PD cultures therefore accept the difference in power as part of the society. In fact they believe that it is natural and beneficial for some members of a group or society to exert considerable control over their subordinates. Therefore respect and formal deference for high status people e.g. bosses, parents and elders are valued. To maximise the existing respect-difference distance, formal interaction are preferred by members of high PD cultures (Gudykunst, 2003). The subordinates expect to be told what to do and they do not question their superiors' orders. This means that the low status person is not expected to engage in or is even prohibited from free and voluntary interactions. Further, one does not openly disagree with, or say 'no' to the boss. It is also likely that the subordinates will feel uncomfortable if their contribution is asked for. They might perceive this as a lack of ability and knowledge on the part of the superior asking for their involvement.

During the usability evaluation exercises, it was noted that the Kenyan farmers who are from a high power distance culture preferred to interact very formally and answers to questions asked during the evaluation were either 'yes', 'no' or simply silence. It was also noted that when the farmers interacted amongst themselves, there seemed to be no inhibition as there was when interacting with the usability evaluators.

6.2 Face Loss

'Face' is a term used metaphorically for our public self-image, the way we want others to treat and see us (Griffin, 2003). In other words, face refers to the "socially situated identities people claim or attribute to others" (Tracy, 1990, p.210). Therefore, when a person feels embarrassed during a particular interaction, this is the effect of losing face while the feeling of pride, or validation or respect is the effect of sustaining face (Cupach and Metts, 1994). The effect of face in usability evaluations among low-end-users is exemplified by these users being reluctant to offer critical comments about an interface despite being unable to successfully execute tasks on the interface whose usability is being tested. This is because they perceive that their critical comments will cause the evaluator to lose face (Yeo, 2001; Winschiers, 2001; Sacher, 1998; Chetty, 2005 and Herman, 1996).

We found that the farmers from both communities were reluctant to make critical comments when carrying out the usability evaluation exercises. During casual conversations later, these users indicated why they felt unable to make critical comments-because criticising the evaluators work in front of

them would cause the evaluator to lose face. We informed the users that the purpose of the usability evaluation was to understand what worked and did not work well on the interface but also to obtain design suggestions from them. They were also informed that their criticism did not offend us and in fact was very useful to the design of the artefact. However, despite this, we did not succeed in obtaining any critical comments from these users about the artefact.

6.3 Previous experience with technology

The past use of an interactive product affects the degree to which a user finds the task easy or difficult to complete. This is because previous interaction with the product allows the user to remember the various steps that are involved which in turn makes task execution easier. Familiarity with a comparable product does influence the extent to which the user finds the product usable. The reason for this is that the user is able to make generalisations across the two products which enables the user to make correct predictions. For example, when a user interacts with a new mobile phone that is similar to one that he or she has used before, the interaction with the new mobile phone becomes easier because of the similarity (maybe in the arrangement of the icons and menus) between the two mobile phones. On the other hand, if there is no uniformity between the two similar products, then the previous use of technology experience is of little or no help because it may actually act as an impediment if the user decides to draw from it (Jordan, 1998; Shneiderman and Plaisant, 2004; Mayhew, 1999; Thomas and Bevan, 1996). As a result of this, it was expected that during usability evaluation exercised, users who had a higher level of previous technology experience would have higher quality user feedback than those with lower levels of previous technology experience.

6.4 Gender and Tribal Affiliation

We observed that both men and women tended to have different roles within the community, thus working on different activities on a day to day basis. They also did not freely mix in public. Although this attribute is more apparent among the older generations it is not non- existent among the younger generations. Therefore during usability testing, same-gender pairing up seemed to be most sensible to employ. Tribal affiliations were noted to be strong. Although each of the two farming communities had a specific ethnic tribe, Winschiers and Fendler (2007) suggest that tribal affiliations are crucial when executing user testing among these type of users. Thus if there is teamwork or particularly pairing up of users, those users ought to be from the same tribal grouping for high quality user feedback.

6.5 Our reflections of Usability Evaluations

Due to the cultural differences discussed above, usability experts will need to consider adapting the UEM they use in order to obtain reliable user feedback

when carrying out usability evaluation exercises among low-end users. The following are some of suggestions on how to carry out these UEMs adaptations;

- When carrying out usability evaluations whose objective is to understand the context of the users' actions, if the UEM(s) chosen involves a high user/evaluator communication interaction, then that method should be adapted so that the user/evaluator interactions communication is reduced or removed.
- As much as possible, try and employ UEMs that have a level of teamwork aspect in them. If the chosen usability method lacks collaborative aspects in them, then an adaptation of that UEM towards being collaborative is highly recommended. However, it is suggested in that collaboration, the users need to be of the same level of technology experience, be of the same tribal grouping and same gender.
- The users' level of previous technology use does affect the quality of user feedback. Therefore, the higher the level of previous technology experience, the higher the quality of user feedback and vice versa.
- It is likely that simultaneous user verbalisation and task execution may affect the quality of user feedback, make effort to separate these two aspects in the usability evaluation process.
- Seek to significantly reduce or remove the likelihood of the usability evaluation exercises having an 'examination' feel to them. This may be by replacing tasks with real life scenarios, serving drinks beforehand, seeking to know the users before the exercise etc. The evaluator should only implement that which they feel is appropriate in each given situation.

One of the difficulties that we faced was trying to obtain design suggestions from the farmers during the usability evaluation process. We noted that they were not willing to give critical comments about the interface, even when they were encouraged to do so. Consequently, there needs to be further investigation on how to obtain design suggestions from low-end-users.

7 Final Reflections

Using ethnographic methods affords the researcher more time with target users in their natural environment, making it easier to elicit the user requirements which are a reflection of the 'real' user needs. It also allows the iterative evaluation of the prototype from an early stage by the users in their natural context, carrying out tasks that are relevant and useful to them and at a time that is most convenience for them. The product designer is able to find out if the intended interactive product is appropriate to the local needs and conditions and whether it has a positive impact on the users' daily lives. It would also be possible to assess if the intended interactive product suits the way the target users propose to use it and whether it is easily affordable and accessible for them. The product designer would further be able to assess what the locally relevant content and applications for the target users would be and more im-

portantly how to integrate the intended interactive product use into the target users' daily routine. It will also be possible to assess if the target users will be able to sustain economically and in other ways the intended interactive product once it is implemented.

By adapting UEMs when evaluating interactive products among low-end users, this not only respects them culturally but also makes the usability evaluation process an effective and pleasant one too. Further, the usability evaluation results obtained are also reliable and can be compared across different cultures without any bias.

This paper has presented a reflection of research we carried out in Kenya among rural farmers. The aim of that research was to develop interactive products that the farmers would use to improve their farming practices. By reflecting on our research practice, we were able in this paper, to share what went well during our time of the research and point out what could be done differently in the future. For low-end mobile and consumer device development companies considering the emerging market, these insights are valuable because they inform the design and development for the next one billion users.

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CROSS-CULTURAL UNDERSTANDINGS AND DESIGNS OF SOCIAL ROBOTS AS CO-AGENTS OF GOOD LIVES

Panel organizer: Satomi Sugiyama (Franklin University Switzerland, Switzerland)
Chair: Charles Ess (University of Oslo)
Panel participants
Nello Barile (IULM, Italy)
Davide Fornari (SUPSI, Switzerland)
Isabelle Hupont (Instituto Tecnológico de Aragón, Spain)
Christine Linke (Independent Scholar, Germany)
Satomi Sugiyama (Franklin University Switzerland, Switzerland)

Keywords*: social robots, information and communication technology, emotion, design*

Abstract: Although the idea of social robots has been a part of our everyday life, it has been largely in the realm of science fictions and media reports about robot engineer's laboratories, or adopted in particular settings such as the therapy for autistic children and the elderly care. This creates an impression that social robots are rather removed from our immediate everyday experiences. However, those robotic technologies are increasingly incorporated into our surroundings as relational partners (e.g., robot pets such as Tamagotchi, Aibo, Zoomer, etc.), or useful assistants (e.g., Rumba). Furthermore, some researchers argue that ever smarter mobile ICTs can be considered as a form of social robots, suggesting the greater relevance of social robots or robotic functions for everyday human experiences and emotions (e.g., Sugiyama & Vincent, 2013; Fortunati, 2013; Barile & Sugiyama, 2014).

This panel explores the broader idea of social robots in our current and future everyday life. According to Breazeal, Takanishi, and Kobayashi (2008), the main goal of social robots design is to be able to engage in interpersonal interactions in a natural manner so that people can "achieve social-emotional goals in diverse applications such as education, health, quality of life, entertainment, communication, and collaboration" (p. 1349). How do people perceive/experience some of the social robots and robotic functions that are designed such goals in mind? Are those robots and quasi-robotic mobile ICTs facilitating "good lives"?

The first panelist, Satomi Sugiyama, will discuss the broader notion of social robots as well as some examples of social robots in the context of Japanese culture. The second panelist, Christine Linke, will consider the human-social robot interaction focusing on intimacy. The third panelist, Isabelle Hupont, will present her research on emotions and human-machine interaction with a particular attention to the methodological approach. The fourth panelist, Nello Barile, will present the idea of the automation of taste facilitated by ever-smarter ICTs and algorithm by taking an example of music applications "Shazam" and "Spotify." The last panelist, Davide Fornari, will offer his perspective on the design aspect of social robots. Using these presentations as a starting point, this panel seeks to stimulate further ideas and raise questions regarding how social robots can play a role of co-agent for good lives across cultures.

1 Presenters

1.1 Satomi Sugiyama (Franklin University Switzerland) Robots as a cultural object in Japan: From cartoons, ICTs, to humanoids

One of the cultural contexts that have been gaining much attention regarding the robot development and its social applications is Japan. Many interesting cases of animaloid, humanoid, and geminoid are under development in the research laboratories in Japan, some of which make an occasional appearance to the public (e.g., as a sales assistant *Minami-chan* at the Takashimaya department store in Osaka; Palro at an elementary school in Saitama prefecture). Robot cartoon characters such as *tetsuwan atomu* (astro boy) and *doraemon* have a familiar presence to the mind of Japanese public, serving as common cultural references. Furthermore, the vocaloid, *hatsune miku*, offers an interesting example of an artificially created human presence without the material body. This presentation considers some of these prominent examples of robots in the contemporary Japanese society, exploring the role culture plays in the development of robots as well as the attitudes toward robots and robotic objects in everyday life.

1.2 Christine Linke (Independent Scholar in Communications and Media)Relating with technology: Intimacy, reciprocity and intersubjectivity in human-social robot interaction

This presentation examines the aspect of relating in human-social robot interaction. The analysis is driven by the idea that the way humans engage socially with technology is one of the important aspects for understanding the arrival of social robots to people's daily lives. The presentation first reviews the research on intimate communication with ICTs in order to develop an analytic framework that illuminates human-social robots interaction. It then raises some essential questions regarding the social processes that occur when humans interact with different forms of technology. For instance, how are meaningful phenomena such as reciprocity and intimacy created, and what does this mean for existing ideas of sociability and humanity? What are the conditions of relating with social robots? Which impact do social norms and rituals have on human-social robot interactions? How far can certain subjectivity or even intersubjectivity be created in human-social robot interaction? The presentation closes with the discussion of if and how the concept of a relationship can be applied for human-social robot interaction.

1.3 Isabelle Hupont (Instituto Tecnológico de Aragón, Spain) Emotracking and affective crowdsourcing: Understanding the eye of the crowd

The emotional aspects of Human-Machine Interaction have garnered an increasing amount of attention in the last decade from an evaluation/user ex-

perience perspective. Affective feedback is typically acquired from users right after the interaction through questionnaires in supervised small- scale laboratory tests, and later analyzed by means of traditional statistical methods. While well manageable, such testing campaigns are expensive, time-consuming and results may not be enough intuitive to understand and generalize to larger audiences. This presentation focuses on introducing novel tools and methodologies to tackle these problems. On the one hand, Emotracker®, a state-of-the-art automatic tool that combines eye tracking and facial emotional recognition technologies to build advanced and intuitive visualizations of human affect, will be presented. On the other hand, the novel concept of affective crowdsourcing will be introduced, as it constitutes a promising approach for quickly collecting emotional data from users with wide demographic scope and reasonable costs. Particularly, the challenges of gathering massive subjective perceptions from humans with different cultures, languages, knowledge background, etc. and good practices for carrying out affective crowdsourcing campaigns will be discussed.

1.4 Nello Barile (IULM University of Milan)
The automation of taste: A consideration of social robots and mobile ICTs through an analysis of *Shazam* and *Spotify*

This presentation describes the implications of the deepest penetration of the mobile ICTs in the everyday life through the miniaturization of technologies as well as the cogent effect of software and new applications controlled by algorithms. As the smart phones and wearable gadgets continue to evolve and come closer to the human body, and also, transform from "a hard and utilitarian conception to a softer ideal based on the emotional value of new devices" as a process of *ontobranding*, this is an important and timely question to examine. In particular, I will considers how the mobile ICTs such as a smart phone has a power to shape, and furthermore, "automate" our emotions and taste by exploring the example of widely-adopted music applications: *Shazam* and *Spotify*. Ultimately, I will argue that the automation of taste, facilitated by the smart phone and its applications and algorithms, leads to the human carrying some traces of robots.

1.5 Davide Fornari (SUPSI, Switzerland)
Open sourcing robotics: innovation vs. standardization

Several years ago Bill Gates described the period of innovation of technologies connected with robotic as something similar to what happened in the evolution of personal computers over the 1980s. His forecast was that a consistent growth in the field of social robotic for home use could only be the result of the definition of standards. Not only social robotic has not yet reached a stage of standardization, but the remit of interest for robotic has expanded to industrial and interaction design. The diffusion of open source hardware such as Arduino and the network of Fablabs have made possible the development of social robots in form of interactive, self moving devices. The innovation in this field is

then intended to become a distributed activity within the community of users who work on shared hardware bases that allow for customization of devices.

2 Biography of panelists

2.1 Nello Barile

Nello Barile teaches Media studies and Sociology of cultural processes at IULM University of Milan where also coordinated for 6 years a Master programme in Creativity Management. He holds a PhD in communication sciences, resources management, and formative processes at University of Rome "La Sapienza." He has published numerous books in Italy such as Brand New World: Il consumo delle marche come forma di rappresentazione del mondo (Milano 2009). He also published articles and short essays in France, Germany, Brazil, and USA, such as "From the Posthuman Consumer to the Ontobranding Dimension: Geolocalization, Augmented Reality and Emotional Ontology as a Radical Redefinition of What Is Real" in intervalla: vol 1: Social Robots and Emotion: Transcending the Boundary Between Humans and ICTs, ed. Satomi Sugiyama & Jane Vincent, and "A Knot to Untie: A Social History of Ties Between Fetishism, Communication and Power" in Habits of Being (vol. 2), ed. C. Giorcelli & P. Rabinowitz, Minneapolis: University of Minnesota Press 2012. He is also the editor of The New Television Ecosystem (Peter Lang 2012) with A. Abruzzese, J. Gebhardt, J. Vincent and L. Fortunati.

2.2 Davide Fornari

Davide Fornari holds a PhD in Design sciences from University Iuav of Venice and is a tenured teacher researcher at the Laboratory of visual culture of SUPSI University of applied sciences and arts of Southern Switzerland, in Lugano, where he teaches History of graphic design and coordinates the Master of advanced studies in Interaction Design.

He edited the Italian translation of Heinrich Wölfflin's *Prolegomena to a Psychology of Architecture* (Milan 2011) and the collection of essays *Estetiche del camouflage*. In 2012 he authored the essay *Il volto come interfaccia* ("Face as Interface") with a grant from Swiss National Science Foundation. He is a member of the permanent observatory of ADI (industrial design association) and of the editorial board of the magazine "Progetto grafico". He is a member of the program Studio Roma at the Swiss Institute in Rome for the academic year 2014-2015.

2.3 Isabelle Hupont Torres

Dr. Isabelle Hupont Torres obtained a M.Sc. in Telecommunications Engineering in 2006 and a Ph.D. in Computer Science Engineering in 2010 from the University of Zaragoza (Spain). During the last 8 years, she has been a devoted researcher in the fields of Affective Computing, Human- Machine Interaction and User Experience, focusing on bridging the gap between machines and hu-

man emotions. Since 2007 she works as a full-time researcher at the Aragon Institute of Technology (ITA), where she leads the Multimodal Human-Machine Interaction research line and the User Experience lab. She has a deep expertise in the use of novel tools for automatically measuring UX, such as eye trackers, body trackers and facial emotions recognizers. Isabelle is also an Assistant Professor at San Jorge University of Zaragoza since 2011, where she teaches Computer Graphics, Computer Vision and Human-Computer Interaction.

2.4 Christine Linke

Christine Linke, Dr. phil., is an independent communications and media scholar based in Berlin, Germany. She has received a doctoral degree from the University of Erfurt, Germany. Her research focuses on media and technology in everyday life and in social relationships. She is working on theoretical questions regarding ritual interaction and the delimitation of communication processes. She has been involved in empirical projects on gender and media at the Free University of Berlin. During her position as a Guest Professor at the Berlin University of Arts she has been teaching and researching in the area of Sociology of Communication.

2.5 Satomi Sugiyama

Satomi Sugiyama (Ph.D. Rutgers University) is associate professor of Communication and Media Studies at Franklin University Switzerland. Her research interests include communication technology (particularly mobile technology), culture, and fashion processes. She has been conducting research on the way young people perceive and use the mobile device in various cultural contexts. Her work has appeared in several edited books as well as academic journals including *New Media and Society*. Sugiyama received MacArthur and National Endowment for the Humanities fellowships at Colgate University while completing her Ph.D. at Rutgers University. In 2010, she has received the international exploratory workshop grant from the Swiss National Science Foundation in order to initiate a collaborative work exploring the notion of social robots and ICTs. The workshop outcome has been published in *intervalla: platform for intellectual exchange* (http://www.fc.edu/intervalla). The workshop also led to the COST workshop on social robotics, spearheaded by Leopoldina Fortunati (University of Udine) in 2013. In this endeavor, she has been exploring the idea of the mobile/smart phone as a "quasi-social robot." She is currently co-editing a special issue "Social Robots: Form, Content, Critique" for the International Journal of Social Robotics (Springer) with Michaela Pfadenhauer and Charles Ess.

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FACULTY MEMBERS AND THE PRESERVATION OF DIGITAL MATERIALS AT FIVE AMERICAN UNIVERSITIES

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Keywords: *digital preservation; digital curation; personal data management*

Abstract: *A study of fifty-four professors at five American universities found that a majority had little understanding of principles informing the ongoing preservation of digital materials and chose to manage and store work-related data by relying on the use of their own storage devices and cloud accounts. It also found that a majority of them had experienced the loss of at least one work-related digital object that they considered to be important in the course of their professional career. The data suggest a strong correlation between faculty members' digital-object loss and their data management practices. University professors producing digital objects should be aware of the fact that these materials are extremely susceptible to loss. They should also know that the implementation of better data management practices and the development of programmatic digital curation efforts on university campuses can help to mitigate university professors' loss of important work-related digital materials.*

1 Introduction

In the past twenty years many college and university faculty members have made digital materials integral parts of their work. A professor's collection of work-related digital objects often includes important, unique research data or other products of the creative process. In the past ten years many information professionals have come to warn that digital objects are very prone to loss. They have emphasized how incompatibility with newer versions of the software that created them, the incompatibility of the media on which they are stored with newer hardware, and storage media's inherent vulnerability to degradation, especially when neglected or abused, can render digital materials unusable. This paper shows how such potential risks produced a loss of digital materials in a university setting. A survey of fifty- four university professors employed at five American universities of moderate size revealed that these scholars produced digital materials in a wide variety of formats; that most sought to manage and preserve their work-related digital objects themselves through the use of an ad hoc collection of non-networked computers, portable storage devices and/or cloud accounts; and that a majority had suffered the loss of at least one digital object that they considered to be important to their work. These findings show university faculty members who remain unaware of their digital objects' high susceptibility to loss that their materials are in fact at great risk, and encourage them to seek new ways to preserve them for future use. Information professionals have, in concert with a growing awareness of the fragility of digital materials, developed a number of valuable descriptions of best practices in the

preservation of digital objects. These range from recommendations for effective personal data management to guidelines informing the measures, often described as digital curation, needed to manage and provide continuing access to digital objects in an institution-wide, programmatic fashion. To date, the latter recommendations have largely found implementation among librarians and archivists seeking to secure materials directly entrusted to their care. Thus while college and university professors, especially those producing a large volume of digital materials or making highly complex, unique digital objects, can benefit from improved personal data management practices, they can also promote the implementation and extension of digital curation measures at their institution.

2 Literature Review

The literature exploring the problems and potential solutions associated with the preservation of digital materials has largely framed the risk of digital object loss in hypothetical terms, emphasizing that such materials created in past years are often not readable by today's hardware or software. In addition, it reminds us that storage media is subject to failure, particularly in cases of neglect or damage, in which digital materials can lose their integrity. (Pogue, 2009). In exploring how this risk affects scholars and institutions of higher education, researchers have produced studies of faculty members' attitudes toward and practices in managing and storing work-related data, but seldom provided empirical studies of actual data loss in this population. In 2008 one investigator in the field called for more work to be devoted to "quantifying the extent of digital information loss or compromise, or, at the very least, to document more examples to supplement the few specific studies currently available." (Harvey, 2008, p. 2). Six years later, library professionals and university scholars can still benefit from this type of data.

Several works provide a clear picture of university professors' current understanding of digital preservation issues and data management practices. A 2013 study of faculty members at American universities and colleges conducted by Ithaka (the organization behind JSTOR and Portico) found that 80% of respondents in the Sciences, and nearly 80% in the Humanities and Social Sciences, preserved research data themselves, using commercially or freely available software or services. (Housewright, Schonfeld, &Wulfson, 2013 p. 63). The University of North Carolina's 2012 report Research Data Stewardship at UNC: Recommendations for Scholarly Practice and Leadership found that "While some (faculty members) save data in repositories or centralized servers, others relied on external hard drives or CDs for backup. Beyond the research project period, some faculty admitted that few, if any steps were taken to preserve their data long-term." (School of Information and Library Science at University of North Carolina [SILS UNC], 2012 p.10). A 2011 publication concluded that academic archaeologists and art historians surveyed "generally did not understand preservation issues surrounding their images….The preservation practices associated with their images were generally done on an ad hoc basis." (Beaudoin, 2011, p. 493).

Work providing information about the actual rate of loss of scholarly digital materials in a university setting, while quite scarce, suggests that loss is quite common. In 2006 the Digital Preservation Coalition (UK) presented Mind the Gap: Assessing Digital Preservation Needs in the UK, a report based on a survey of "a wide range of organisations in different sectors," including education, libraries, archives, museums, local and central government bodies, scientific research institutions, and also from organizations in the pharmaceutical, financial, manufacturing and engineering, media, energy and chemical, and publishing industries. (Waller & Sharpe, 2006, p. 11). In it, researchers reported that only 29% of respondents to a 2005 survey reported that they had "not lost access to some digital information as a result of it being impossible or too expensive to recover. Even when referring to their most important type of data, this proportion only rose to 43%." (Waller & Sharpe, p. 18). In a 2013 study, a team of Canadian scientists working at universities and research institutes examined the availability of data sets ranging from two to over twenty years old, finding that amidst prevailing data management practices "the odds of a data set being extant fell by 17% per year," and concluding that "the availability of research data declines rapidly with article age." (Vines et al., 2013, p. 19).

3 Research Methodology

In 2012 and 2013 a team of researchers supported by a grant from the Institute of Museum and Library Services (USA), explored university faculty members' creation and management of digital materials at five American universities. Potential participants included grant applicants and recipients (as provided by each institution's Office of Sponsored Projects) and scholars whose publications resided in an institutional repository. Of the 119 candidates contacted via an email message requesting a 30 minute, in-person interview, fifty-four professors provided researchers with data. Those interviewed for the study included faculty members representing a wide range of disciplines, including specialists in the humanities, the physical sciences, the biological sciences, the social sciences, engineering and education. During the individual interviews, participants were asked to describe their professional activities and the nature of the digital information they created in the course of their work. They were then asked to describe how they managed and stored their data, and to describe any loss of work-related materials they had experienced.

4 Findings

Study participants provided the following data. In response to a request for an account of which of their digital materials they would most want to recover in the event of an apparent loss, participants named resources pertaining to four major functions of university life. Participants were asked to name any and all types of digital materials that they would most want to recover, not a single type of materials. Forty-two participants (75%) identified scholarly materials (30 named research data, and 12 scholarship in a broader sense) as deserving long-term preservation. Twenty-three (41%) designated teaching materi-

als; ten (17.8%) selected administrative and/or organizational materials; and five (8.9%) named electronic communications. When asked which specific file types they would most want to recover in the event of loss, thirty-two participants (57%) stated that they would want to recover .doc files; twenty-three (41%) declared that they would want to recover .pdf files; fifteen (26.7%) indicated that they would want to recover .jpg files; thirteen (23%) reported that they would want to recover .xls files; and twelve (21.4%) declared that they would want to recover .ppt files. Other file types mentioned by at least four participating faculty members included .wav (7), .tiff (8) .gif (7), .html (5), mp4 (5), mp3 (6). Fifteen participants (26.7%) stated that they would want to recover materials ("other") not represented in the twenty-eight file types mentioned in the project interview.

Faculty members' responses to inquiries about how they managed and stored such highly- valued, work- related digital materials found that most relied on some combination of individual, non-networked devices and services. Again, participants were asked to name any and all digital object storage and preservation methods that they used, not a single method. Thirty-seven (66%) relied on the hard drives of their office computer; twenty-two (39%) used an external hard drive; twenty-one (37.5%) used a hard drive as a built-in component of a personal computer; eighteen (32%) used cloud-based services; sixteen (28.5%) used a Flash/USB drive; ten (17.8%) used their email account(s); six (10.7%) used means or devices not mentioned in the project interview's list of storage options; and three (5.4%) relied on optical discs like CDs or DVDs. Relatively few faculty members interviewed took advantage of opportunities to back up their materials in more secure environments. Twenty (35.7%) employed institutional network capacity made available for the storage of work-related materials, and one (1.8%) participant made use of a discipline-specific external repository.

In many cases participating faculty members experienced the loss of work-related digital materials. Thirty-one (55.3%) of participants indicated that they were aware that they had lost work-related digital objects and been unable to replace them with backup files in the course of their professional career. Thirty-five (62.5%) participants reported, upon researchers' inquiries about other materials that might be unavailable for use due to software obsolescence or incompatibility, although no recent attempt had been made to open them, that they believed they had been affected by such previously unrealized data loss. Those participants eschewing the use of university-furnished network storage were particularly susceptible to data loss. Of the thirty-one reporting knowledge of a past data loss, twenty-three (74%) were among those relying entirely on free-standing devices, optical discs and external services, usually in some combination. Of the thirty-five individuals reporting a previously-unrealized data loss, nineteen (54.2%) made it clear that they were relying only on non-networked devices for their data storage.

Given the wide array of devices and accounts that participating faculty members used to store their work-related digital objects, these individuals' personal data management practices became particularly important to the survival of their digital materials. Of the fifty-six participants asked about their management of work-related data, ten (17.8%) mentioned the importance

of keeping copies of materials on multiple, synchronized devices (including university network and/or cloud storage) at different geographical locations, a fundamental principle emphasized in widely-accepted standards and summaries of best-practices for the preservation of digital data. (National Digital Stewardship Alliance [NDSA], n.d.). Two (3.6%) of the participating faculty members reported that they actually backed up materials by synchronizing a set of storage devices on a regular, frequent basis (one mentioned daily backups, the other weekly). Each of these participants remarked, in a response to researchers' standard request for any additional comments, that the process required them to spend considerable amounts of time on the management and preservation of their digital objects. These challenges proved to be too great for one of the remaining eight professors attempting to maintain a set of synchronized, geographically dispersed storage devices. During the interview process s/he remarked, upon reflection, that due to the amount of time required and complexity of the task, s/he had not in fact maintained a complete set of his materials on any one device, much less several.

5 Discussion

The data presented in this study show that participating university faculty members identified several distinct types of digital materials, consisting of objects existing in a large number of different formats, as resources that they would most want to recover in the event of their apparent loss. Participants' responses support the conclusions of previous work (Beaudoin) finding that a large majority of university professors possessed very little understanding of basic concepts and practices (i.e., the need to store copies of materials on multiple devices at different geographical locations) necessary to provide greater probability that their digital objects will remain available and usable in the future. Participants' responses also bolster the findings of the Ithaka and North Carolina reports showing that most faculty members at institutions of higher education store and manage data that they have identified as important using an ad hoc system of non-networked devices including personal computers, portable hard drives, and flash drives.

Library and Information Science standards and best practice recommendations for the most basic, effective digital preservation measures direct individuals and groups seeking to manage and preserve digital objects to a) store them on networked devices, and b) maintain additional, up-to-date versions of all materials on devices located in a different geographic location.(NDSA, n.d.) The use of network storage typically provides a dramatically higher probability of successful preservation of digital objects because in the vast majority of cases the data residing there become the responsibility of information technology professionals charged with maintaining equipment in effective operating condition and securing stored materials. The contents of such professionally managed university networks are typically backed up on additional devices, like tape drives or other forms of high-capacity external storage, on a regular, automatic schedule. This study's results suggested that network storage was an effective way to begin to mitigate the risk of digital data loss. Nevertheless, most did not make use of this readily-available capacity.

The storage of digital materials on servers or devices in different geographical locations helps to reduce the risk associated with events that may destroy or otherwise render unavailable all copies located within a specific building, as in the case of a fire or burglary. (NDSA, n.d.) In order to be most effective, the geographical separation of different copies of the same digital object should be quite significant, so as to maintain safe copies in the event that a tornado, hurricane, earthquake or flood might inflict large-scale damage an entire town, city, or region.

Finally, the study's empirical data showing that in this context a majority of participating university faculty members experienced the loss of work-related digital objects addresses a request, made eight years ago, for work "quantifying the extent of digital information loss or compromise, or, at the very least, to document more examples to supplement the few specific studies currently available." (Harvey) It also supports the findings of the Mind the Gap and Canadian scientists' (Vines, et al) studies finding that actual data loss has taken place among university researchers.

6 Conclusion

Information professionals warning creators and users of digital materials of their high risk of loss have largely relied on an argument explaining how a variety of acknowledged risk factors can, and likely will, lead to loss. This study's findings, by contrast, show that a majority of its participants have recently suffered the loss of digital objects that they considered to be important. Although these findings may initially be discouraging in that they document the ongoing loss of digital materials in a university setting, they are hopeful in that they suggest that these losses are very likely not due to mysterious, unknown causes. Rather they can be correlated with a set of readily comprehensible dynamics and practices.

The study showed that participating faculty members produced digital objects in a large number of formats and file types. Like their many peers described in the literature discussing faculty members' data creation, storage and use, a majority of study participants sought to manage and preserve their digital objects by relying on an array of non-networked devices and service-provider accounts, rather than their institution's network. In doing so a great majority showed no knowledge of, and thus failed to implement, basic principles of personal data management, such as the need to maintain separate copies of materials on discrete devices, synchronized regularly and stored at different geographical locations. University faculty members can address these risk-enhancing practices by making use of their institution's network and implementing the above-mentioned personal data management practices. In the long run, universities' implementation of more comprehensive, programmatic digital curation measures can dramatically increase the probability that selected digital objects will remain available for future use.

Comprehensive curation activities include the development of policies and workflows, as well as the technical capacity, to provide for the assessment of a given set of digital objects at risk of loss; the evaluation of digital objects in

order to determine which of them are important enough to require long-term preservation; the evaluation of selected digital objects to determine if their preservation requires their conversion into another format; the conversion of objects to new formats as needed; the provision of metadata informing future users of a digital object's properties (i.e., its creator, its date of creation, the subject(s) to which it pertains, etc.); the storage of digital objects in formats allowing them to be migrated to (i.e., opened, used and stored in) future software applications; the storage of these objects on a number of different devices located at such a distance from one another so as to preclude the risk of loss from disastrous events; the continual monitoring of stored digital objects, in order to detect the degradation of individual files; the comparison of multiple copies of the same digital object, stored in different locations, in order to determine if any has become compromised; and the overwriting of a compromised file with the contents of another, intact copy of the same. In some cases digital preservation activities also include the emulation or replication of functionality provided by obsolete software applications or operating systems. (NDSA) (Fyffe, Ludwig & Warner, 2005, p. 6) (van der Hoeven, Lohman & Verdegem, 2007)

The literature encouraging the adoption of such digital curation activities in an institution- wide, programmatic manner emphasizes that information professionals and scholars should not assume that their institution must implement all of the above practices at once or remain in a state of pronounced vulnerability to digital object loss. Rather, it encourages digital curation planners to put progressively more effective practices into place over time, providing increasingly secure levels of preservation for digital materials. Scholars seeking to benefit from programatic digital curation measures are advised to contact their university library and ask what activities, if any, are being taken to mitigate the risk of digital-object loss at their institution. If they find that programs (beyond the simple use of network storage) are already in place, they will likely be able to benefit from them. If there are no programs underway, scholars can hasten their creation and implementation by contacting department chairs, deans, and provosts, encouraging them to address the issue of digital curation as soon as possible.

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AN INTERACTION APPROACH FOR NORM-CRITICAL DESIGN ANALYSIS OF INTERFACE DESIGN

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Abstract: *In this paper we argue for the need of a methodological framework for analysing the design of websites from a norm-critical perspective. Identifying some issues and challenges in previous studies on norms and values in interface design we suggest an approach for analysing norms in websites and user interfaces based on sociological and cultural perspectives on design. Approaching norms in interface design we understand design in terms of resources for interaction, involving four aspects of interaction: cultural representations, technology, interactivity, and context.*

1 Introduction and aim

The first generation of Internet researchers perceived the Internet as a space separated from the prejudices and norms of the "real" world (Meyrowitz, 1985; Rheingold, 1993). This utopian idea was called into question by the next generation of Internet researchers (Wakeford, 1996; Kendall, 2002) claiming that no one only inhabits the Internet (Kendall, 2002). The norms and prejudices of the offline world continue to exist online (Kolko, 2000). Studies on norms and values in computer systems have also been highlighted in the field of Human Computer Interaction (HCI) (Friedman et al., 2006; Bardzell, 2012).

In this paper we propose an approach for norm-critical design analysis of interface design such as websites. Norm-critical perspectives are well-established frameworks within research areas such as education (Martinsson & Reimers, 2008) gender and queer pedagogy (Bromseth & Darj, 2010) feminism (see for example Butler, 1990; Bromseth & Darj, 2010; Powell, 2012) intersectionality (de los Reyes, Mulinari & Molina, 2007). Critical studies on norms have not been explored to the same extent in HCI, even though efforts have been made (Bardzell, 2010; et al., 2011; Friedman et al., 2006). Norm-critical perspectives in HCI can be described as a broad framework of ideas and perspectives that study and question ideas of normality and social norms in information systems, related to work in, for example, critical design (Dunne & Raby, 2001; 2013; Blythe et al., 2008; Bardzell et al., 2011; Bardzell & Bardzell, 2013), feminist HCI (Bardzell, 2010) and value sensitive design (Friedman et al., 2006).

In this study, norms are, on the one hand viewed as a concept describing intersubjective, shared and implied rules and expectations of behaviour in social communities or in society at large (Foucault, 2002; Butler, 2004) and from a ethnomethodological perspective, understood as a resource participants can invoke in the accomplishment and organization of situated actions and activi-

ties (Heritage, 1987; Suchman, 2007). Social norms also imply an understanding of how actions are supposed to be performed and how you are supposed to behave towards and in relation to others. From an ethnomethodological perspective, norms are not seen as predetermined but rather as resources invoked in interaction and made relevant at particular points with particular interactional implications. Norms might also be ways of understanding how actors organize activities and the social structures of achieved actions (Garfinkel, 1967; Suchman, 1987; 2007).

The purpose of this study is to shed light on a significant but still underdeveloped research area in the multidisciplinary field of HCI: critical studies of norms in/of interaction design. Due to this shortcoming we suggest an approach that aims to make visible the invisible, the "unspoken spoken" (see for example Foucault, 2002) i.e., the implicit social rules, expectations and relationships in/of the design of interactive systems. Our approach is based on previous studies of norms and norm-critical perspectives in societal domains as well as important influences from the HCI community such as embodied interaction, value sensitive design and critical design. We begin by presenting our perspective on design before describing some current ideas on critical design and norm-critical design relevant to our purpose. Then we discuss some methodological challenges and issues and propose a critical approach for the analysis of social norms in interface design and interactive content. Our understanding of design rests on a sociological account, viewing design primarily as creating resources for actions and interaction (Dourish, 2001; Suchman, 1987). From this perspective interaction with computers should always be understood as being socially and contextually situated.

2 Critical and norm-critical analysis

Critical perspectives and theory are often used to shed light on hidden ideological, semiotic and symbolic structures in socio-cultural contexts (Dunne & Raby, 2001). A subfield developed from critical perspectives concerns the critical study of norms. Norm critique is both an analytical tool and a method with which agencies can make their own prerequisites to change power structures (Tema Likabehandling, 2012). The analytical purpose of norm critique is to understand how power relations and structures function and hinder equality and inclusiveness at all levels of society, such as interactions between people and distribution of resources and access to key societal functions such as work, education and health care (Tema Likabehandling, 2012). Norm-critical studies focus on social norms, power relationships and inequality of sexuality, gender, class, race, ethnicity or religion. Several norms can be at work at the same time. This is understood as intersectionality (de los Reyes, Mulinari & Molina, 2007). Norm-critical perspectives question, challenge, transform and create new norms and standards, but also shed light on how groups may benefit from reproducing norms (Kumashiro, 2002; Martinsson & Reimers, 2008). To visualize norms also means to question these and make the privileges visible, as well as examine one's own position (Bromseth & Darj, 2010). Beginning by asking 'who benefits from this social order?' it is possible to discover how norms are

reflected in different activities, actions and situations (see also Martinsson & Reimers, 2008; Dolk, 2013). Having a norm-critical perspective means to explore and visualize norms that affect our actions, values and beliefs.

3 Critical design

Critical design is an area of research that has been used in HCI as a way to make users and designers reflect on their own practices and to ask which norms and values are reproduced in the design (Bardzell & Bardzell, 2013). The concept of critical design was developed in the field of interior and interaction design, defined as a possible way to get consumers to take a more critical stance towards their everyday life and consumption of artifacts, aiming for a practice of reflecting on the beliefs, values, ideologies, norms and behavioral patterns incorporated in design and artifacts (Dunne & Ruby, 2001). Criticality in design can be traced to critical design traditions such as post critical architecture, anti-design, conceptual design and contemporary critical design. Criticality is rooted in a design tradition of questioning the ideas, exposing structures and creating a space for discussion of power, inequality, capitalism, industry and technology that underpins conceptions of design. It is however hard in many contemporary design domains to locate the terms of criticality, as the basis in capital, industry, and technology no longer hold in the same way, or to the same degree. Post-critical proponents explore notions such as performativity, procedures, and pragmatics rather than concepts of resistance, disjuncture and negotiations (Maze & Redström, 2009).

According to Maze and Redström (2009) critical design can be understood as certain practices or "approaches that might deliberately mix up traditional measures of value – playing one against the other to criticality in and through practices". From this perspective the notion of criticality is formulated as "within" the actual design work, as a method to make designers reflect on their own practices (Maze & Redström, 2009). Instead of limiting the notions of criticality to "a kind of theoretical development that happens through, and from within, design practices and not by means of external descriptions or analyses of its practices and products" (Maze & Redström, 2009), we argue that a critical notion on design should be understood as a practice that must be analysed from both "within" and "outside" design practices, through external descriptions and analysis of the design, as designing and decoding are flip sides of the same coin (Pauwels, 2012). Criticality focuses also on questioning and exposing structures of inequality and practices of obscuring power (Tema Likabehandling 2012), opening up a space for discussion, reflection and revelation. There are numerous examples of critical design concepts. In Sweden, an interesting example of a critical design concept is Ehrnberger's work on redesigning a mixer by using stereotypically masculine symbols and a drill designed in stereotypically feminine features such as soft lines and in white and pink (Ehrnberger et al., 2013).

4 Norm-critical design and perspectives

Norm-critical design can be understood as a sub-field of critical design where the specific focus is on the relationship between design and social norms and how to support existing practices of norm-critical analysis in the design domain. Previous work by Lundmark and Normark (2012) have, for example, shown how social norms can be embedded in interaction design and how different user roles and identities are made relevant within the design processes of the specific design project of an online youth counselling site, UMO.se (Lundmark et al., 2011; Lundmark & Normark, 2012). The study follows a group of designers designing an animation about what happens in the body when falling in love. The designers of this project actively worked with a norm-critical approach in their design work, and by following their work some concrete examples of design challenges involving normative and value sensitive considerations were identified, as well as examples of how norms and values can be manifested not only in textual or pictorial content, but also in the design at large. This previous work acts as a point of departure for a discussion on how interaction design consisting of technology, interaction, images, sounds and text together may construct meaning, norms and values in design. The study referred to here also argues that there is a need to further comprehend issues related to how digital design embeds norms and to examine how the relationship between norms and design can be critically examined. Another study along this line performed as part of a bachelor thesis (Faber & Alexandersson, 2013; Faber et al., 2014) suggests a method on how to apply a critical perspective on the design process of a video production project. The method, enabling practical implementation of critical design in a design process, is based on the perspectives of defamiliarization, evaluation and provocation drawn from previous research on critical design and led to a changed process of design and other questions being presented and invoked during the process.

5 An approach for norm-critical design analysis

In the following chapters we outline a preliminary approach for performing norm-critical analysis on interactive design with a specific focus on websites. To approach websites from a norm-critical perspective, decoding the cultural information that resides both in form (design) and content is important (Pauwels, 2012). Norms are embedded in the technological artefact and the interface as well as in its symbols, texts and images. As such, our notion of interactions in websites is to be understood from four different perspectives; *cultural representations, technology, interactivity* and *context of use*. These perspectives are interrelated in analyzing social norms in society and culture and how these are embedded and reflected in technology, interface design and content.

5.2 Cultural representations

Websites are unique expressions of contemporary culture and as such they constitute a huge repository of potential data about contemporary ways of doing and thinking within large groups of ethnic and national boundaries

(Pauwels, 2012). This notion of websites involves a broader sociological and anthropological view on society, analysing human behaviour and material culture that includes intercultural and intracultural differences and expressions of norms and values, expectations (Pauwels, 2012) in an understanding of what social norms are embedded in the design and what norms are absent. In this study cultural expressions refer to visual, textual and auditory representations. Exploring cultural representations on websites involves, for example, a discussion of the presence or absence and portrayal of a social group (Williams et al., 2009). Critical questions are; Who/what is represented visually and textually and who/what is left out? What possibilities for identification are there? Visual representations mainly deal with questions of how people make sense of and use information that contains meaning (Blackwell, 2013). In HCI, visual representations are the principles by which markings on a surface are made and interpreted (Blackwell, 2013). This means that theories on visual representations, for example, texts, typography, maps, node and link diagrams, drawings, pictures, signs and symbols and visual metaphors focus on making meaning rather than norms (Blackwell, 2013). Just like messages, norms can be decoded (Hall) symbolically through images, texts and audio sounds, through possibilities of interaction and limitations set up and designed into the system. Studies on race representations in computer games (Leonard, 2003; 2006) have shown how computer games draw on racial stereotypes in their characters, such as Asians being represented as martial artists, Cuban drug dealers as violent rappers, Arabs as terrorists and Latinos portrayed as criminals (Leonard, 2006). "Such stereotypes do not merely reflect ignorance or the flattening of characters through stock racial ideas but dominant ideas of race, thereby contributing to our common sense ideas about race, acting as a compass for both daily and institutional relations" (Leonard, 2006). Of course visual representations come in many different forms and shapes; graphical representations (charts), non-graphical representations (images), numerical representations (tables). However for our norm-critical purpose, an analysis of images, pictures and sounds are relevant to understanding the way in which norms are represented. In media studies, analysis of ideological discourses by content analysis is common method we consider relevant for a norm-critical study of websites. Content analysis is also useful for analysing norms in interface design of websites including the structure and organization of menus, tabs, options, chat forums, communication channels and so on.

5.3 Interactivity

Unlike graphic design, interaction design includes design of a system's behavior and flow and focuses on the product's aesthetic qualities in combination with user experience.

To be able to understand and critically approach digital artefacts, an analysis of interactions as well as limitations of interactions made available by the system is therefore needed. Critical questions to ask are: What kind of interactive and communication space does the site allow for? What actions and interactions can and cannot be performed? The analysis of interactions from a norm-critical perspective is based on the understanding of interaction

as comprised by a broad range of agents and actors, including both people and artifacts. Thus, a critical analysis of interactivity includes, for example, how users interact with the interface and content and how the technology communicates back to the users through feedback and actions connected to the users actions as well as how the users reflect on and communicate with the interface. As a part of this norm-critical approach for analysis is the question of whether it is possible to identify practices of resistance, counter strategies and performances. Embedded points of view and implied audiences (Pauwels, 2012) are studied as part of interaction within the relevant target groups, but also by trying to find what is lacking, what is made invisible in interaction etc. Social norms, for example in HCI imply understandings of how actions are supposed to be performed and how users are supposed to behave towards and in relation to others. These norms are present and can be made visible through the study and analysis of interaction. Also the interactions that the system allows for imply certain norms, such as being able to click on the mouse, make choices, menus, navigation, feedback and the possibility to interact with the system, with other users and within the system. One example of how norms can be implied within a web-service through the users' interaction with the systems is the "Like"-function that is used on several social medias (such as Facebook, YouTube etc.) to provide feedback about other users' contributions. The Like-function is used to appreciate (or not appreciate) other users' actions within the social media but it is also part of the construction of people's view of social media and embeds a value; that social actions should be graded, reviewed and commented. The normative aspect of the Like-function occurs in its use and interaction: the way that it is applied to approve of certain expressions while not of others (see Lundmark & Normark, 2011). Even though there seldom exists a "Dislike"-function, the lack of "Like" feedback from peers is also an experience of feedback. The impact of the way that functions make sense to the users and create meaning can show values and norms within the interface. The way that the interface design presents itself to the user largely affects the way the user interprets the meaning of the activities happening there. The implicit meaning embedded in the interface design is invisible in the sense that we do not think about how it structures our actions and interpretations of the online world (see also Bowker & Star, 2000). Also the "culture of profiling" (Bromseth & Sundén, 2011) in social media illustrates a normative sense of interaction. Thus, profiling in social medias often consists of "point-and-click menus" and "ready-made" identity options" (ibid) that the user can choose from. This creation of normative actions in social media, are not often questioned in the design of these applications. Also the various options allowed within functions (or lack of options) are relevant to an analysis from a normative approach. Also, on the website Ravelry (www.ravelry.com), a large crochet and knit community, members can chose between several functions when giving feedback on a members' post; such as educational, interesting, funny, agree, disagree, love. Although these feedback options also imply a grading and reviewing system similar to the Like-function, these options express various alternatives for providing feedback where users have the option to be more varied than if using the vague Like, such as for example give an instructive

pedagogical kind of feedback "educational" as well as a friendly and intimate response "love".

5.3 Technology

In addition to these perspectives we propose a technical investigation of norms similar to (Friedman et al., 2006) adopting the position that technologies in general, and information and computer technologies in particular, provide "value suitabilities that follow from properties of the technology". Technical investigations focus on how existing technological properties and underlying mechanisms support or hinder human values and norms (Friedman et al., 2006). Freidman and his colleagues exemplify this through the illustration of a video-based collaborative work system, in which some systems provide blurred views of office settings while others provide clear images. These two designs illustrate a value trade off between the values of privacy and awareness. How can these ideas be understood in a norm-critical approach to technology? In a thought experiment, imagine an automatic photo filter option for diversity that replaces individuals of the dominant gender with the unrepresented gender or minority gender, or individuals of the dominant racial group with an equal number of people of color, heterosexual representations with homosexual and transsexual representations or representations of functional ability with functional disabilities, and so on when it is needed. A website for a children's daycare center, could for example use the filter option to add men and replace some of the women from the staff. The purpose with the filter option is to add diversity to unequal representations of groups, social institutions, private sectors and organizations. This technology may also open up for reflections regarding the social norms that we are unaware of by adding diversity to homogenous representations. Photo manipulation is a technology used for normative purposes, for replacing "beauty defects" and manipulating people's bodies, faces and nature in accordance with a given cultural norm of beauty. This technology can be used for various purposes but implicit in this technology is the manipulation of an object, be it a photo, image or picture. It is used for manipulation of bodies, faces, and skin-colors and the social norms of beauty.

5.4 Context of use

An analysis of norms in user interfaces cannot be limited to graphical and textual representations, functionalities, organization of data and technology but focuses on the context in which these are used and manifested in our everyday lives (see also Dourish, 2001). In this study 'context' refers to the technical and social context in which the technology is used, as interactive technologies are intrinsically intertwined with the fabric of all relationships between people, institutions and practices. Technical context can be understood in terms of the tasks that the system is being used for, for example ordering a service, shopping, education or entertainment (puzzle and task solving) systems, music services and so on. A focus on context is not limited to what users do but also includes *who they are* and *where* and *when* they use the system. A focus on the context and culture matters fundamentally in interpreting normative

expressions (Lundmark & Normark, 2012) Interactive systems in general are manifested in our environment and incorporated into our everyday activities. The specific designs or user interfaces are various and the general implementation of interactive systems is more significant than the specific system (Dourish, 2001). The social context is the social setting in which the website is used. For example, the technical context of use of a website or web-based service could be the use of web-based services such as information seeking, dialogue, guidance, navigation, functions, buttons, games included in the service, how images and text are related within the services etc. The social context of use could be related to the people that use the service for information seeking or guidance and the people who have been involved in the design of the service. It also involves the context in which the website is used, for example, at home, school, work or in other settings, as well as on which platforms the website is used, and for what purposes.

6 Concluding discussion and future work

The study of norms in HCI is a limited area of research and therefore lacks a theoretical and methodological framework. In this paper we have presented an outline for a norm-critical design analysis based on a foundation of research and studies related to critical design, norm-critical perspectives and previous work on norm-critical design. The approach is not a theory as it does not aim to explain why or how social norms work in design but is a methodological toolkit to approach the study of social norms within interactive systems. The approach takes several perspectives on interactions; as cultural representations, interactivity, technology, context of use. Each of these can be studied separately as well as in relation to each other. Our focus in this study is the design of websites, but the approach is not limited to websites. It can be generalized to other kinds of interactive media systems, platforms and products as well. The approach presented here should be understood as a starting point for both the development of theoretical and methodological tools for norm-critical design analysis and for further discussions on issues related to norms and normative values inherent in design, interactive content and structures. The brief outline of the norm-critical approach for analysis has raised several questions that we discuss in this paper but these questions need to be developed and further elaborated upon. Our work in developing this approach for analysis is based on studies made on norm-critical perspectives in design for services mainly concerned with health communication and counselling services directed to youth in Sweden. In future work we will continue to develop this approach and the analysis outlined and posted for further discussion by testing our ideas in an empirical study of the design of interactive systems.

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IN PURSUIT OF *COOL* AND ITS IMPLICATIONS FOR THE DESIGN PROCESS

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Keywords: *cool, values, Participatory Design, teenagers*

Abstract: *Marketers have long understood the value of cool as a predicator of consumer behavior. Recently, researchers within the field of Design of information systems have taken an interest in the concept and how it can be used in the design process in order to design more engaging technologies. Yet there is little research and design with teenagers. This paper describes how using cool as a design guideline in a participatory design approach affected the process and the outcome. The novelty in this approach was that cool was frontloaded throughout the project with the objective of designing a health-oriented social networking site with and for teenagers. The study demonstrates how cool contributes so that teenagers and teenage patients can participate on their own terms in a design process, resulting in mutual learning and a more engaging process and end result.*

1 Introduction

> *Chat.no is seriously uncool, because you can see that old people got together and tried to make something hip.* (Boy, 15)

Over the past six decades, designers have given more and more attention to the future users of their solutions (Sanders & Stappers, 2008). It is well established that when designing interactive products, we need to understand the potential users as well as the context of potential use. It seems therefore rather paradoxical that there is an absence of design research done with teenagers, as reported by Fitton et al. (2012). Especially in cases of designing online health services, where children and adolescents are being presented as especially amenable due to their proficiency in using the internet (Baños, Cebolla, Oliver, Castellano, & Botella, 2012), teenagers' opinions are missing. Ethical challenges of doing research with young patients have resulted in an underrepresentation of teenage patients in the design of health care technologies; instead letting their proxies represent them (Lang, Martin, Sharples, Crowe, & Murphy, 2012). But while the ethical guidelines and restrictions have been implemented to protect vulnerable populations, they hinder the inclusion of adolescents and that in itself is unethical (ibid).

This paper reports on a study where the objective was to design a health-oriented social networking site for teenage patients in Norway (Machniak, 2013). The study was part of a larger design project called KULU ("KULU - Kul teknologi for unge med langvarige helseutfordringer," 2014) aimed at understanding how young patients use online resources and designing technologies together with them in order to support them in their autonomy. Presenting a case study of Upopolis, a social network for young patients in Canada, van

der Velden and El Emam (2013) discuss the benefits, challenges, and risks of introducing and using patient-centered social media. The study demonstrates how despite the benefits of meeting others with the same condition and the opportunity to share about their disease, only a small number of teenage patients are using the offer. Van der Velden and El Emam (2013) report that Upopolis was designed with age appropriateness in mind, thus targeting young patients aged 5-19. Obviously, what is age appropriate for a 5 year old is not as appropriate and engaging for a 15 year old. What is age appropriate for teenagers?

When trying to design a health-oriented social networking site for young people with chronic health challenges I therefore needed to understand them and their worlds. How could I not end up with another design that was trying to be *hip,* obviously designed by grownups who do not understand teenagers? Luckily for me teenagers have their own phenomena, a concept that belongs solely to this population, namely the concept of *cool* (Fitton et al., 2012). Following this argument, *cool* may be used as an indicator for what is age appropriate for this population.

I would like to present my empirical work with focus on how the decision to use *cool* as a design guideline affected the research and design process. In the following section, I will introduce the concept of *cool* and the main debates surrounding this concept. Following this I will describe the implementation of the study and how *cool* was frontloaded through methods and techniques. The paper concludes with a discussion on how the concept of *cool* as presented in the literature can relate to design and how design can contribute to better understanding of the concept.

2 The concept of *cool*

> *There is no one definition of cool.*
> *There is no one definition of beauty*
> *Art*
> *Obscenity* (Liu, 2004, p. 177)

The concept of *cool* as a social construct, is one of the most popular ideals of the new millennium transcending the boarders dividing Westerns and non-Western contexts (Rahman, 2013). Pountain and Robins (2000) argue that *cool* is not a passing fad but rather a universal phenomenon influencing the institutions, media, and economy. Despite its huge influence and the companies' resources going into *cool* hunting, and all of the involved fields and scholars (Runyan, Noh, & Mosier, 2013), there is no unambiguous definition of the '*cool*' concept. The word itself presents us with paradoxical properties as being used as noun, verb, and an adjective (Culén & Gasparini, 2012).

Thompson (1973) describes how both languages in Europe and in tropical Africa have *cool* as both a reference to temperature, and more metaphorically to include composure and control especially under stress. Moore (2004) presents how the word appeared as an expression for a specific behavior in books as early as 1869, when Laurie utters his disappointment with not re-

ceiving an invitation in "Little Women". Pountain and Robins (2000) go as far back as the Italian Renaissance and the notion of *sprezzatura* which was an attitude of aristocratic disdain and the cultivation of appearance of effortlessness in accomplishing difficult actions (p. 53). Both Moore (2004) and Thompson (1973) argue that the metaphor is natural and cross-cultural, as certain emotions such as anger, passion, etc. are historically hot and connected to instability, while Thompson links *cool* to African tribes where being *cool* meant wearing 'a mask' of coolness not only in times of stress but also of pleasure. The belief there was that the cooler a person was, the more ancestral s/he became. Baraka (1963) provided the most used description of the emergence of *cool* as a defense mechanism against the white oppression in America in his book "Blues People: Negro music in White America" .

> *The term cool in its original context meant a specific reaction to the world, a specific relationship to one's environment. It defined an attitude that actually existed. To be cool was, in its most accessible meaning, to be calm, even unimpressed by what horror the world might daily propose. As a term used by Negroes, the horror, etc., might be simply the deadeningly predictable mind of white America. (...) It is perhaps the flexibility of the Negro that has let him survive; his ability to "be cool" - to be calm, unimpressed, detached, perhaps to make failure as secret a phenomenon as possible. In a word that is basically irrational, the most legitimate relationship to it is nonparticipation.* (Baraka, 1963, p. 213)

While Afro-Americans, described thoroughly by Baraka used *cool* as a defense mechanism against the white oppression, during the 1950s, *cool* became a rebellion against the older generations among the young people in mainstream Western society. At that point, the concept began its diffusion into mass culture and consequently became ever-changing (Rahman, 2013) and slippery (Gerber & Geiman, 2012).

Moore (2004) makes an interesting comparison between the slang terms *cool* and *swell* where he argues that even though *swell* lasted in its role from about 1920 till 1965, and somewhere between 1950 and 1960 '*cool*' took over its place, and the two terms represent the same core referents or values followed by the young people. These values distinguish them from the not-so-young anymore. However, we must not misinterpret Moore's comparison. While arguing that both *swell* and *cool* could be understood in terms of youth's distancing themselves from the values of previous generations and obtaining a measure of rebelliousness, Moore stresses that *cool* indeed took over *swell*, but implied a quality of *knowingness.* The *knowingness* according to Moore regards conventional values as phony and hypocritical, and that central for this knowingness for *cool* are qualities of detachment, emotional calm, and control, qualities, he argues, that *swell* did not evoke. "Whichever way you spell it, it's as well to remember that the word *cool* is not merely another way of saying 'good'. It comes with baggage – an alternative set of values which are often profoundly in conflict with official values." (Pountain & Robins, 2000, p. 32)

2.1 Cool: trait or product?

It's a sort of
"I know it when I see it"
type of thing. You can argue
'til the cows come home
that this was or wasn't cool,
but it's all pretty subjective. (Liu, 2004, p. 177)

Cool is valued by the majority of the population. Nevertheless, it is especially valued among, and some scholars claim that it originates from (Fitton et al., 2012; Horton, Read, Fitton, Little, & Toth, 2012; Nancarrow, Nancarrow, & Page, 2002; O'Donnell & Wardlow, 2000; Rahman, 2013; J. C. Read et al., 2013) teenagers (Runyan et al., 2013). Even though there is some debate as to whether trends stem from *cool* or the other way around, there is no denying that there is a connection between what teenagers think is *cool* and *uncool* and what trends are dominant at a specific point in time. However, there is much agreement on the claim that *cool* is a subjective concept, approachable only through opinions of groups and individuals. An even greater debate has had scholars and marketers wrinkling their foreheads, namely whether *cool* is an attribute, or characteristic of a product or a person? This debate is especially relevant in context of designing new technologies. If *cool* can only be a trait of a person, this necessarily implies that in order to design for *cool* we must identify *cool* people and then design in accordance with their preferences something that they can use. On the other hand, if *cool* is a quality of a product, we might be able to design *cool* things with people who are not necessarily *cool* and still manage to design a *cool* product.

The debate leaning towards defining *cool* as a quality of a person, or even a trait (Pountain & Robins, 2000) is dominated by the literature in economics and marketing describing the work done by the so called "coolhunters". The literature within this field reviewed in this paper agrees upon assigning *cool* to individuals, claiming that *cool* products become *cool* only when *cool* people use them (Southgate, 2003). In an early paper, Rahman et al. (2009) support Belk's position in claiming that *cool* is a performance dependent on the audience's validation. Thus *cool* is more related to people's behavior than products. Supporting this stand, Pountain and Robins (2000) exemplify this by the following statement: "If *Cool* is not inherent in objects but in people, then what is seen as *Cool* will change from place to place, from time to time and from generation to generation" (ibid., p. 21). While being intuitively valid, this argument does not explain why vintage objects have gained so much popularity during the last decade. While not taking an explicit stand in the debate in his later works, Rahman moves more in the direction of assigning *cool* to products, describing them as means of manifestations of one's identity and uniqueness, especially among teenagers (Rahman, 2013). The literature within the field of interaction and product design claim *cool* to be product-centered while remaining socially ascribed (J. C. Read et al., 2013).

Through their study, Read et al. (2011) derived "Essential Categories of *Cool*". The six categories are: rebellious, anti-social, retro (as being clearly from

another era; an outdated cell phone is not retro – a vintage bag is), authentic (as must-have items and brands), rich/big money (costly items that might represent the individual as being rich), and innovative (here meaning something that surprises people with its unusualness). From these categories, Read et al. derived a hierarchy of *cool* (Figure 1) consisting of what people strive after. On the top of the pyramid there is 'being *cool*'. This can be obtained through the middle part of the pyramid: 'doing *cool* things', and the bottom part of the pyramid: 'having *cool* stuff'. Read et al. (2011) argue that people strive after being *cool*, even though this is hardest to achieve. Thus our design space stretches across 'doing *cool* things' and 'having *cool* stuff'.

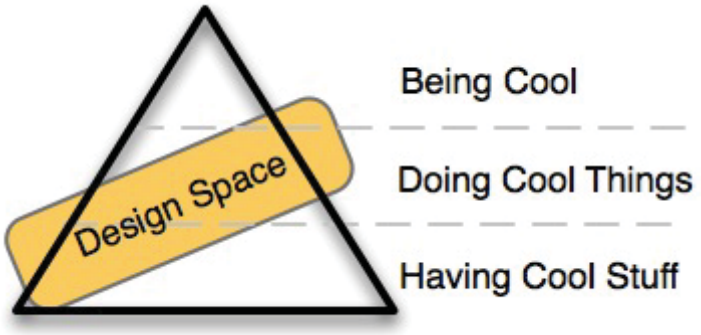

Figure 1. The Hierarchy of Cool (Read et al., 2011, p. 1569)

Sundar et al. (2014) supports Read et al. (2011) and the view of *cool* as socially constructed but a possible and positive attribute of a product and stresses that *cool* is an evolving idea which is in a state of constant change causing the perception of *cool* to be temporarily unstable. While basing the elements of *cool* on the same qualities as Read et al. (2011), Sundar claims that "Coolness is an unplanned byproduct of a single-minded quest of excellence in product design" (2014, p. 172). Hence Sundar (2014) takes similar stand as Soutgate (2003) in supporting Rushkoff's call for making our own trends as opposed to mass-producing trends found by the coolhunters before they've had a chance to mature.

One of the central works involving '*cool*' within the design field is Holtzblatt's "What Makes Things *Cool*?" (2011). In this paper, Holtzblatt presents *joy* as the absolute center of *cool*. Joy, according to Holtzblatt, contributes to the understanding of why the experience of *cool* is so compelling. Joy does not however come from a specific feature, or aesthetics, but emerges when products satisfy a number of key motivations: *accomplishment, connection, identity, and sensation*. Tools that help users with fulfilling these motivations, e.g., tools that allow teenagers to see what others of their age are doing and help them in their quest for identity or tools that facilitate the joy of being able to keep in touch with others, may evoke the "I can't go back" experience in technologies.

Assigning *cool* to people and limiting the coolness of objects to whether they are being used by *cool* people removes the subjectivity of experiencing coolness of a product. An argument supporting the *cool* as a trait part of the debate would be the recent opposition against the pressure of consumerism.

Although different peer groups have different perceptions of what it means to be *cool*, and what behavior characterizes a *cool* individual, the underlying

values of *cool* connected to their developmental stage such as connecting with peers, the search for independence and the ongoing search for identity which is the key task of the adolescent and uniqueness, are the same. Found in the pitfall of the narcissism paradox of conforming to a unique group, teenagers still strive toward the same goals implying that the values of *cool* are shared across cultural and geographical boarders. Although O'Donnell and Wordlow (2000) build their theory on the origin of *cool* on rather challenged literature within the field of psychology; their argumentation supports Moore's analysis of *cool* as a slang term embracing certain values which detach teenagers from their elders. Further, Moore (2004) states that *cool* as a knowingness of what's up to date does not necessary imply up to date in fashion but rather in technology. The term *cool* is widely applied in contexts related to software use and development.

Cool is indeed hard to measure. Because *cool* is a subjective concept it is difficult to examine how *cool* matches across people, not to mention groups or cultures (Gerber & Geiman, 2012). Regarding *cool* as a subjective concept, approachable only through opinions of individuals, does not provide us with any consistency or insight into this phenomenon. Nevertheless, assigning *cool* to people as opposed to assigning it to artifacts presents us with new ethical challenges: does an opinion of a computer geek as presented by the American film industry matter less than the opinion of the most popular and *cool* kid at school? Who decides whether a person is *cool*?

To answer this dilemma, Runyan et al. (2013) define *cool* as an emotion of either hedonic or utilitarian nature about a product. They divide hedonic *cool* into four categories: *singular cool* (need for uniqueness obtained through products), *reference cool* (defined by a group which the teen wants to associate with), *personal cool* (communicating and identifying oneself through objects), and *esthetic cool.* By introducing esthetic *cool,* Runyan et al. view *cool* as a value that is common to all people, contributing to making a product *cool* among youth. Without going further into the interesting work of Runyan et al., I would like to highlight one of their main points which is that even though youth might engage more with hedonic products and type of use of the internet, they might find utilitarian products *cool;* hedonic dimensions of *cool* might be more important than utilitarian, while the reverse might be the case in others. Thus *cool* does not mean one thing or apply to one group of consumers.

The main differences in the presented debate lie in the argued beholders of *cool*. However, both sides of the debate emphasize values connected to *cool* – values existing and connected to *cool* since "Little Women" and the Yoruba tribe in tropical Africa. My claim is that as long as there are any values connected to *cool* - these are inscribed into *cool* products, such as Wenger's (1998) notion of reification of values. And much like Wenger's concept of reification, there does not necessarily have to be any direct reference between the symbol and reference or, in this case, values and artifact's design. As such this reification may be disconnected from the lived experience, but may on the contrary take a life of its own and, beyond the context of its origin. If the *cool* values are inherently possessed of the teenage population, these values play a role in their biopsychosocial development and will therefore be relatively stable

across generations. How can we then design for *cool* within the field of design of information systems?

Embracing the concept of *cool* as a materialization of values allows us to see *cool* as the ideals and qualities that people find important and worth pursuing. Halloran et al. (2009) recognize that products resonating with users' values are more successful than product that do not. However, like *cool*, values are not there a priori waiting for us to discover. As Iversen et al. (Iversen, Halskov, & Leong, 2010) argue, values *emerge* both explicitly and tacitly through dialogue, observations, and interpretations.

2.2 Cool as a design guideline

The use of *cool* as an adjective and as "an ultimate term of approval" (Rahman 2012), stretches far beyond the age limit of adolescence. "As an adjective, *cool* in its contemporary vernacular sense expresses the outer-layer meaning of good, fine or fashionable. It is a generic term of approval, which saves the user from ever being short of something to say". (Rahman 2013, p.621) Consequently, *cool* has evolved different meanings and has spread to mass culture. This has important implication for design. As Read et al. (2013) argue, when designing for children or teenagers, the distance between what is thought to be understood and what is actually understood might be quite large. To a certain degree this is caused by the designers and researchers thinking that they know this population because they were once a part of it. This misjudgment might have grave consequences for the future of the design.

Whether we design for or with teenagers, we need to understand them and their world (Horton et al., 2012). Fitton et al. (2012) argue that by understanding what is '*cool*' from the perspective of teenagers "it may be possible to distill guidelines for the design of engaging products and technologies for this population" (ibid. pp. 143). This means that the designer turns to what engages the future users and uses this info as a guideline before turning to heuristics. This was precisely what I *thought* I was doing.

3 Cool research

At this point we can wonder what is so special about *cool* with regards to design. With its width and slipperiness, how does *cool* differ from simply age-appropriate, fun, hedonic, etc.? Looking back at my research, I find Wittgenstein's "Philosophical Investigations" helpful to express what I experienced. "Language is an instrument. Its concepts are instruments. Now perhaps one thinks that it can make no great difference which concepts we employ. (…) Concepts lead us to make investigations; are the expression of our interest, and direct our interest" (Wittgenstein, 1958, para. 569–570). In the following sections I will describe how the decision to put an equation sign between *cool* and age appropriate became my lens at the world and the way of doing things.

3.1 Cool methodology

The study took on a Participatory Design (PD) perspective following the argument that PD "takes into consideration the needs, interests and abilities of the youngsters, but also includes a more profound interest in their hopes, fears, dreams, and opportunities to express themselves as someone of importance" (Iversen & Smith, 2012, p. 113). PD is a design approach which aims to *actively* involve the people designed for and other stakeholders in the design work (Brandt, 2006) with a focus on *mutual learning.* It is "a process of investigating, understanding, reflecting upon, establishing, developing, and supporting mutual learning between multiple participants in collective 'reflection-in-action'" (Simonsen & Robertson, 2012). The approach springs out of the idea that the ones affected by the design should have a say in how it is designed (Ehn, 2008), not only by deciding what the outcome will be, but also by sharing their expertise on perspectives and preferences regarding the activity that may be supported by this particular design (Carroll & Rosson, 2007). Including the users expands the space for design idea and results in functionally superior and more creative solutions (Bratteteig & Wagner, 2010). What distinguishes PD from similar approaches is that the work is done *with* and not *on their behalf* (Spinuzzi, 2005) with the focus on *mutual learning,* causing the lines dividing users from designers to blur (Luck, 2003).

PD is a research methodology with a highly articulated methodological orientation, methods and techniques (Spinuzzi, 2005). It offers tools and techniques to engage children and teenagers in design, but more importantly helps them to realize that they have a choice (Iversen & Smith, 2012). The methods include, but are not limited to interviews, observations, future workshops, prototyping, and many more. The specific developmental stage the teenagers are in makes it even more important and necessary to see them as equal participants and hear their views on the world.

The concept of *cool* has even more significance in the context of PD precisely because the knowingness of *cool* belongs to the teenagers putting them in an expert position and allowing for equalizing the power structures in the design situation as well as for mutual learning. In addition, focusing on designing the methods around *cool* forces us to start thinking about the teenagers as our experts. My claim is that *cool* and PD hang together as simply reproducing the existing trends which would be the case in other approaches where teens would be merely informants. Approaching *cool* from a PD perspective allows us to get innovative with the *cool* and create better and more engaging technologies.

As I argued in the previous section, *cool* consists of values. Values are also central in PD, as PD "makes explicit the critical and inevitable presence of values in the system development process" (Suchman, 1993, p. vii). Embracing values is presented by Iversen et al. (2012) as an ethos respecting people's democratic rights. Addressing values when talking about PD and design in general is important due to the dynamic relationship of values to design and as Halloran et al. (2009) claim, "values are not only a resource to frame technological development; they are also caused by it" (p. 246). Values also help to mediate co-design relationships and help to define roles, expectations, and responsibilities (ibid).

I would like to stress that because of this inevitable and unbreakable relationship between values and PD, PD seems to be the only appropriate methodology when designing with teenagers and *cool*. To include teenagers in the design process, simply treating them as informants, interview objects, or survey respondents is not sufficient to ensure that the design will be appropriate for them. In the context of my research, the main point was to include the voices of young patients and teenagers, therefore PD, which grew out of critique of mainstream design for not including the voices of future users (Brandt, Binder, & Sanders, 2012), was the methodology of choice.

3.2 Cool methods

This board's cool. Can I ask you weren you got it? (Boy 16)

As predicted by Wittgenstein, *cool* was not only what I was trying to find, it became the predicator of how I would find it. When preparing for meeting my participants, I was considering different tool to help me design together with teenagers. When designing, tools give both designers and non-designers the ability to make things, to make sense of and envision the future. The artifacts allow us to use our hands and externalize and embody our ideas of the future and the future artifacts (Brandt et al., 2012). Thus inspired by the work of Fitton et al. (2012), I decided to use a modified version of the "Cool Wall" as my design tool during semi-structured, interviews (Figure 2). In their research Fitton et al. used a simple screen, the *Cool* Wall, where the participants could use buttons to move different images of *cool* objects into four categories (sub-zero, cool, uncool, and seriously uncool). To achieve a tool that was both low tech and tangible, I decided to use a metal plate and magnets with images attached to them. After the pilot interview, I switched the board to a glass-covered whiteboard which allowed the participants to draw on it. Because the tools needed to allow for easy disinfection if shared between patients (Culén & van der Velden, 2013), the pictures on the magnets were covered with marbles. The interviews were individual despite Gerber and Geiman's (2012) argument that when researching *cool* it is more fruitful to work with groups rather than separate individuals in order to ensure more accurate estimates. I was neither interested in accuracy nor in estimates.

The study of Fitton et al. (2012), while including the teenagers and their opinions in terms of their preferences, treated *cool* much like the coolhunters described by Gladwell (1997). The aim of their study was to find out what the young people thought was *cool* by quantifying the *cool* objects. The aim of my study however, was to design while using *cool* as a guideline. The aim of discussing was not to uncover what was *cool* per se, but to explore the *how, where,* and *why* of *cool.* As Wittgenstein (Wittgenstein, 1958) distinguished between phenomenon and a concept "We are not analyzing a phenomenon (e.g. thought) but a concept (e.g. that of thinking), and therefore the use of the word."

Figure 2. Rating of other social networking sites (left) and one of the designs (right).

As abovementioned, Fitton et al. (2012) used four categories in their Cool Wall. However, after the first interviews, I decided to include a 5th category, "whatever", as advised by the teens. They argued that things are not just *cool* or *uncool.* Some sites or functions could be made better, and some were just neutral with regards to coolness. The *Whatever*-category contributed to uncovering the often conflicting feelings towards presented sites and functions. Hence, even when it came to the method, opinions of the participants were included and contributed to bettering the method.

The interviews were divided into 4 phases. During the first phase of the interview, we discussed their lives and what role technology played in it. Thereafter we discussed the perceived coolness of existing social networking sites and functions by rating them on the cool wall. During the last part of the interview, the teens designed the health oriented social networking site for teenagers and we talked about what role it would play in lives of its users.

The specific reason for exploring the *cool* by focusing on why the different functions were *cool* and when they were *cool*, opened a whole new range of interesting results. In 2012, anyone who owned the computer could tell you that Facebook was *cool* and that anyone could use it. However, by asking the teenagers what made them rate Facebook as *cool* uncovered that some of them felt as if one had to have it, even if their privacy was the price. Supporting Runyan et al.'s (Runyan et al., 2013) argument that products may evoke emotions in consumers without actually consuming the product, several participants reported that they perceived Twitter as a *cool* site even though they did not use it themselves. This indicates that the perception of the coolness of the technology is not dependent on how it is used and who uses it. However, whether the site had a significant user mass had a say for whether the teens would consider using it or perceive it as *cool*.

We will leave this enquiry for now, as the results are not of direct importance for this paper. But let us bear in mind that when designing for *cool*, especially in a participatory design approach, it is important to let go of one's

own ideas and visions. Before I even started talking with the participants, I had a vision that the goal of the site was to provide its users with information and a possibility to contact other patients. However, the participants expressed that the site should be one of a hedonic purpose with its main goal being to provide social networking site functionality, games, and chat, with health oriented information as a secondary function. The most important aspect was to provide the site's users with a safe place, free from advertisements, and privacy threats of Facebook where young patients could meet other teenagers in the same life situation as their own. The users were supposed to be the "bosses" of the site – that was *cool.*

3.3 *Cool* prototype

OMG! Ask a pro! I came up with that. That's so cool! (Girl, 19)

After collecting data I created a prototype of a health-oriented social networking site for teenagers (Figure 3). The choice of the type of prototype is as decisive for the type of feedback as the choice of participants for the design. The prototype looked like a website and was presented on a laptop, however it only allowed the participants to click through the site in order to evaluate the site's esthetic *cool* (Runyan et al., 2013) and the look and feel (Houde & Hill, 1997) of the site. Runyan et al. (2013) argue that the esthetic *cool* is one of the values common to all people and contribute to make a product *cool.*

When discussing the choice of the prototype, the participants expressed that they liked the laptop and had no trouble understanding what they could click on. The teenagers thought it was fun to see the prototype in a browser. *It makes it easier to see how it will look like. I don't have to imagine how it will look like and I can focus more on the functions. That's cool.*" (Girl, 18). In line with the guidelines presented by Houde and Hill (1997), using a high resolution prototype proved itself to be fruitful when evaluating the prototype in terms of its coolness.

Figure 3. The login page and profile page of the prototype.

As it is not the objective of this paper to report thoroughly on the feedback from the teenagers, I won't go into details. However I would like to highlight a few of the comments I got during the interviews.

Although the overall feedback was positive, and my fears were that the prototype would not be able to generate constructive feedback, the participants surprised me with detailed comments about the type of information presented in the prototype. The site offered information about diagnoses, which in the prototype was a simple copy-paste of information on Wikipedia. The teens however thought it would be much *cooler* and helpful if the information would be of a more practical nature. The information according to one of the participants should help the users learn how different conditions affect what they can do. *If I have a friend who has epilepsy, and would like to go to a movie with him, I would like to find out if I can ask him about it without offending him* (boy, 19). This indicated that there exists a clear link between *cool* and age appropriateness. The teens also complained about the colors of the site, arguing that it would be *cool* if they could decide on the colors themselves, especially on their profile page which correlates with the findings of Runyan et al. (2013) who argue that teenagers use products and technology to show their uniqueness and communicate their identity.

During the interviews, the participants were asked about whether they had a personal computer or if they sit in a room together with others. The teens reported that they were often in rooms together with their parents or with other friends. When thinking about the name for the site, the teenagers were also concerned about potential stigma or bullying if the site's name would reveal the site's purpose for the patient's friends. I therefore designed a 'Panic button' which upon clicking would take the user to a neutral site such as Google. The teenagers were very enthusiastic about this function and expressed that more sites should add this function. They elaborated that it would be perfect when their parents entered their room without permission. This design decision did not stem from an explicit requirement made by the teenagers but rather through what they valued in means of privacy and the importance of being able to control who could see what they were doing on a screen.

The teens expressed enthusiasm over seeing their ideas and designs in the prototype. The parts of the website they recognized as designed by themselves were the coolest. Several participants reported that it was cool how the simple drawings on the whiteboard were now a part of a design which looked like a website. Even if the designed prototype was not *cool*, the participants walked away with the experience of being heard. Upon recognizing their ideas, they expressed pride and contentment.

4 Discussion

The study presented in this paper supports Fitton et al.'s (2012) claim that *cool* can be used as a design guideline for designing engaging technologies. The challenge of using *cool* as a design guideline when designing health-oriented technologies is that *cool,* as explained by the literature, stands for rebellious values of nonconformity with adults and older generations and obtaining a

composed attitude when facing difficult situations in life. *Cool* is a permanent state of rebellion (Pountain & Robins, 2000). Even if the goal is to design technologies that may help teenagers in reducing some of the stress in their lives, encouraging rebelliousness when managing a health challenge is not to be advised. However, Southgate (2003) draws similarities between Aristotle's virtue ethics and *cool* as means of achieving happiness and is concerned with practical reactions with one's situation, for example how to react to the daily struggles with dignity. In case of designing health-oriented technologies for teenagers, using *cool* as a guideline might just help us with creating *cool* tools helping them face their lives both as patients and teenagers with a cooler attitude.

Therefore it is important that the meaning behind *cool*, obtained both through discourse analysis and design activities, is explored, narrowed and focused as to allow for operationalization of *cool* for design situations.

If we can indeed argue for coolness as a perceived attribute of an artifact, product or a technology, we are faced with possibilities of using the values originating from their developmental tasks, manifested by *cool* technologies to support teenage patients in their autonomy, taking control over their lives both as teenagers and patients. Embracing the *cool* values not only sets the ground for functionalities that may support teenage patients in their autonomy, but also may contribute to engaging technologies which the teenagers want to use. By not focusing on *cool* as a personality trait or behavioral pattern represented by a few teenagers and rather applying the concept to products and technologies we may be able to include a bigger population and support the scalability of the design – a challenge technologies designed using a PD approach have to face.

Using *cool* as a guiding concept in research and design breaks with all the rules outlined by Gladwell (1997). *Cool* can only be observed by those who are *cool*. It is safe to say that I, despite of my own opinions and perceptions of myself, am not *cool*. Neither did I find *cool* people first or exclude the uncool. I have also committed the grave sin of trying to capture the current trends and what is *cool*, which should cause *cool* to move on. Further, a fair share of the reviewed literature argues that finding out what teens think is *cool* at the time of the study is of no significant importance for capturing the construct of *cool* and the underlying mechanisms of coolness. Nevertheless, I found the process of talking about what the participants thought was *cool* on the Internet useful for learning about what the participants found important. Among others, Southgate (2003) argues that coolhunting does not help to ensure innovation and creation of the next big thing. However, in the case of my study, investigating the trends gave me a lot of data on functions the teenagers valued but did not include in their design. Talking about what is *cool* helped us to broaden the creative space during the interviews and got the participants going with regards to thinking about what is *cool*, why and where. These important values and *cool*s followed us further when we were talking about the design of the health oriented social networking site.

When describing the workday and strategies of coolhunters working for Reebok, Gladwell addresses the stability of *cool* across time and space. Regardless of the fact that Gladwell's contribution to the current debates is an article in the New Yorker and not a scientific paper; his bold arguments are still un-

derpinning many arguments within the scientific body. Gladwell's coolhunters state that only *cool* people are constant – *cool* things change, hence supporting Pountain and Robin's (2000) stand on *cool* and a personality trait as a combination of narcissism, ironic detachment and hedonism. Therefore, to find *cool*, we need to find *cool* people first, and *cool* things later – not the other way around. Gerber and Geiman (2012) provide a harsh critique of this *cool*-as-a-personality-trait view, by pointing out that if *cool* is indeed a personality trait then it should be possible to measure *cool* through psychometrics.

When looking at *cool* as an isolated phenomenon of a subjective and unstable nature, it is hard to estimate how *cool* differs across cultural and social groups. Yet Rahman (2013) asks us to view *cool* from the perspective of Global Consumer Culture where *cool* refers to a "cultural entity not associated with a single country, but rather a larger group generally recognized as international and transcending individual national culture" (p.622). But with the different meanings attached to the word, it is by nature a subjective word. In addition, while presenting new strategies for dealing with language (Rice, 2003) *cool*'s limitations lay mostly in the notion that language is the means of negotiation while it is simultaneously defining this negotiation. Thus, I would like to suggest that by looking at *cool* both in terms of behavior, consumption preferences and *cool* technologies as manifestations of values and developmental needs opens up new areas of analysis and allows for scalability of the concept and findings in future research. Nevertheless, it is important to stress that I do not limit these values to the '*cool* values', characterized as seeking to destroy order and tradition for liberation and self-exploration purposes, and pointed out by Nancarrow et al. (2002). The values I point to are the values that an individual acquires as a natural part of being a teenager and dealing with the tasks of adolescence: the values of privacy, independency, being unique, being social, etc. Exploring the deeper meaning behind the *cool* may also help us to derive better design guidelines. Especially in the context of health oriented technologies where the teenagers may not have any preferences about other *cool* functions, focusing on what they value and plan to achieve may help us create these in collaboration with them – preferably in a *cool* way.

5 Concluding remarks

It is my duty to stress that I do not by any means claim that the design which resulted from this study is *cool*. The only way of finding that out would be to launch the website and follow its rise or fall and ask users about their opinions. *Cool* does not exist on its own; rather it emerges in relation to other people. However, I think that my co-designers and I experienced a meaningful and an informative learning process. What I can say for certain is that the idea of a health oriented social networking site designed by and for young teenagers is *cool*. The coolest part of it is that we have put the teenagers and their opinions first. The design with regards to aesthetics may vary with regards to its coolness, but the act of involving teenagers in the design and giving them a legitimate decision making right is what's of importance here. Concentrating on values in this case helped in creating functions which succeeded in evoking

real exclamations of "This is so *COOL*!" and creating a wow experience (Hudson & Viswanadha, 2009). These functions may help to achieve the ultimate goal of designing with *cool* as pointed out by Holtzblatt (2011), namely the 'I can't go back experience'. The study also demonstrates that not only is it fruitful to focus on the concept of *cool* when designing with teenagers, but also that using *cool* tools, methods, and methodology might help us with evoking the designers residing in our young participants.

As I am writing this paper almost a year after concluding this study, I can't help but think about how limited the text editor is in conveying what happened. The Word processor has no chance to retell the richness and ambiance of the interviews, the engaging stories told by the teenagers, or how *cool* the whole process was. I guess, you'd have to be there to see it.

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RETHINKING THE IMMERSIVE CULTURAL EXPERIENCE IN MUSEUMS. A CROSSCULTURAL ANALYSIS OF VISITORS' BEHAVIOR BASED ON ROLES.

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Keywords*: immersive, interaction, museum, role, visitor*

Abstract: *The research presented in this paper is one of the first studies to adopt qualitative methods to analyze immersive technology in museums. In this immersive heritage domain, "it is necessary to develop a new and appropriate methodological framework and borrowing, where appropriate, from a range of disciplines" (Economou and Tost, 2008, p.255). This paper presents some of the results of a study of visitors' behavior in the immersive environment PLACE-Hampi at three museums: the Martin Gropius Bau in Berlin, the Immigration Museum in Melbourne and the ZKM in Karlsruhe (pilot study in Germany, main field work in Australia). The focus of this paper is cross-cultural comparison between what visitors did in the immersive environment in Berlin and Karlsruhe and what they did in Melbourne and how they interpreted the space and technology used, by choosing a role. The paper will also present the concept of theatrical interactivity to categorize the form of interactivity developed by the designers of PLACE-Hampi.*

1 Introduction

In the first session, I will illustrate the similarities and differences in the visitors' behavior at the three museums, showing how what was observed in the field along with the results of the data analysis challenge the assumptions of cross-cultural design based on national cultural aspects (Marcus, Gould, 2000, Marcus and Baumgartner, 2003, Baumgartner, 2003). The theoretical part on cross-cultural dimensions is presented at the end of the data analysis for the purpose of comparison, because the study, based on grounded theory (Stauss and Corbin, 1998, Charmez, 2006) is presented adopting an abductive process, where patterns and categories resulting from data analysis are compared with previous theories following coding (Strass and Corbin, 1998, Charmaz, 2006). Following an abductive process means that the researcher goes into the field with an "open mind" (Glaser, 1978), without using national cultural dimensions from the outset, but at a later stage, after the initial and intermediate coding, in a process of continuous comparison (Charmaz, 2006). The methodology used is qualitative and the results are categories, storylines and diagrams.

In this paper, I will present as the main result a new categorization of visitors' experience in museums and its implications for previous theories about the crosscultural design approach. In the conclusion I will summarize and discuss the main results.

2 The case study: PLACE-Hampi

The project chosen for the case study is PLACE-Hampi, an immersive environment designed by Sarah Kenderdine and Jeffrey Shaw. The name itself, PLACE- Hampi, bespeaks the project: it consists of the platform PLACE and is about Hampi. The PLACE platform was designed by Jeffrey Shaw back in the 1990s and allows visitors to interactively explore digital panoramas 360 degrees.

As Oliver Grau (2003) wrote, the platform is in the tradition of panoramas, but innovates the way these panoramas can be explored, with a new interaction design paradigm. Sarah Kenderdine (Schettino and Kenderdine 2011, Kenderdine 2013) describes PLACE-Hampi in this way:

PLACE-Hampi is a vibrant theatre for embodied participation in the drama of Hindu mythology focused at the most significant archaeological, historical and sacred locations of the World Heritage site Vijayanagara (Hampi), South India. The installation's aesthetic and representational features constitute a new approach to the rendering of cultural experience, and give the participants a dramatic appreciation of the many layered significations of this site. In PLACE-Hampi, using a motorized platform the user can rotate the projected image within an immersive 9-meter diameter 360-degree screen, and explore high-resolution augmented stereoscopic panoramas showing many of Hampi's most significant locations. The scenography within PLACE-Hampi shows a virtually representative boulder strewn landscape that is populated by a constellation of 18 cylinders, each one of which is a high-resolution 360-degree stereoscopic photographic panorama.

3 Methodology

In this research, a qualitative method based on a combination of grounded theory (Strauss, Corbin, 1998, Charmaz 2006, Dey, 2003), digital ethnography (Boellstorff, 2012), narrative inquiry (Czarniawska, 2004, Mussacchio, 2008, Everett and Barrett, 2009) and case study (Yin, 2013) was used which can be summed up as an "*embodied constructivist GTM digital ethnography in situ:*

Embodied: the researcher remains in the immersive environment with the visitor, without taking notes or recording a video; the notes are written up immediately after each visitor observation session;

Constructivist GTM ethnography: the researcher uses visitor observation and triangulates the observation with the same visitors; the research process follows the constructivist Grounded Theory Method or GTM; the researcher is aware of the potential bias in the interpretation of the experience; the researcher takes into account cultural diversity in his/her data collection and analysis;

Digital: the researcher analyzes immersive digital projects in situ; this can be considered a subfield of digital ethnography; the immersive environment is not online but in situ, part of an exhibition in a museum.

3.1 Data collection and data coding

The data were collected by observing some 500 or so visitors to the immersive environment PLACE-Hampi at three different museums and exhibitions in Berlin, Karlsruhe and Melbourne. Such data were collected until saturation (Strauss and Corbin, 1998). The observations were conducted in sequences, a sequence being the period of use of the platform (maximum 30 minutes) by a single visitor or group of visitors. The notes were written up immediately after the observations in a quiet corner of the museum. The notes were imported and analyzed in Nvivo. This software provided a database for the data and also a tool for codifying the data. Some other tools in NVivo such as the models were used.

The first coding process provided a list of all the different types of behavior observed during a sequence. Each visitor was faced with two choices: what to do in the space and what to do with the space. The actions signify the behavior of visitors inside the space and how they interact with the platform. The total number of behavior codes by gerundive in the initial coding was 106.

I performed axial role-based coding on the first list of behavior types: visitors had to choose a role that combined the position taken in the space and how they interacted with the platform. For each role chosen there is a shorter list of possible actions. In this way the process of interpreting both the space and platform emerges as a process of playing a specific role during the performance; that is, the collaborative performance of using PLACE-Hampi in a museum.

The 8 roles played by the visitors are:

- Driver
- Observer
- Jumper
- Anti-jumper
- Performer
- Navigator
- Helper
- Stopper

The driver is the person who chose to operate the platform. The driver can be an explorer: someone who tried to use the platform without any help and who learnt by observing previous visitors, by making mistakes or by being helped or someone who asked for or received help from other visitors or the museum staff. The driver can also be an observer, taking over from previous drivers.

The observer is the person who chose not to operate the platform but to observe the panoramas chosen by the driver. The observer can be someone walking around, standing still or sitting on the floor. The observer can be a previous driver who gave other people a turn at operating the platform. Some observers try to avoid getting between the projector and the projections, others don't care. These visitors chose not to drive the platform.

The driver is the person who chose to operate the platform. The driver can be an explorer: someone who tried to use the platform without any help and who learnt by observing previous visitors, by making mistakes or by being helped or someone who asked for or received help from other visitors or the museum staff. The driver can also be an observer, taking over from previous drivers.

The jumper is the person who chose to get onto the platform but not to drive it. This person "jumps" up onto the platform and stands in front the driver.

The anti-jumper is the person, usually a member of staff, who reminded the visitors that they weren't allowed on the platform if they were not driving it because of the limited affordance of the platform (the platform can support a maximum of 2 people at the same time because the engine can move only a limited weight).

The navigator is the person who chose not to drive the platform directly but was on the platform, in some cases sometimes close to the driver, and who chose to give the driver suggestions about what content to explore and how to operate the platform. This person actively negotiated with the other visitors which panoramas to go to sometimes just using words and sometimes also pointing to specific panoramas.

The performer is the person who chose to take an active role, playing with the projections. This person chose to walk around the space, getting between the projector and the projection, trying to reach out and touch the animations. The actions of the performer included dancing or imitating the animations or other people in the photos (such as the women carrying stones). The performers were usually children but some adults also became performers. These performances often made other visitors smile or laugh and some parents even told their children to stop fooling around. Performances were also given by people belonging to the same visiting group, or groups of friends who simulated walking in the virtual landscape, or groups of school children accompanied by their teacher.

The helper is the person who helped visitors to drive the platform. Helpers were either visitors or members of the museum staff. A helper could be a person in a group (like a mother helping a child) or a visitor helping people in other groups (for example, someone who had already driven the platform and who explained the mechanism to someone in another group). The behavior of the helpers was completely spontaneous. When the helpers were members of the museum staff they either decided to help or were asked for help, so their actions were based on an evaluation of what was happening in the space or after speaking with visitors. In one case there was a visitor in a wheelchair and the helper helped this person move around.

The stopper is the person who asked visitors to stop using the platform, for example, a small child started crying and the mother decided to leave the space, visitors who came in as a couple and one of them asked the other to move on to the other rooms.

3.2 Interaction between visitors, playing roles

The space is designed for a maximum of 20 people plus one driver. Inside the space, there were two possible initial situations: the platform was either being driven by someone or the space was empty and the platform was stationary, showing a panorama or the view of the virtual landscape.

Visitors entering when there was no driver had to take the initiative. They usually tried to explore the platform, asked the museum staff for help, or the museum staff took the initiative and explained how to use the platform. Helper-helped interaction took place at the beginning of the performance. Visitors who entered the room when it was empty had to try to operate the platform. The exploration experience was generally successful as they learnt how to drive and explore, learning from their mistakes. Depending on whether the platform was stationary on the virtual landscape or a specific panorama, drivers made two main mistakes that allowed them to understand the interaction paradigm and mechanism. If the platform was idle on the virtual landscape, they tried to move between panoramas, until they accidently or intentionally entered one and in this way discovered that it was possible to explore each single panorama by simply going through it and rotating around in it. In a few sessions some visitors never entered any of the panoramas but continued to jump between them. Some of them chose this strategy intentionally (this behavior was observed in a group of teenagers who enjoyed driving like this in the virtual landscape). Some members of the museum staff also pointed out this type of behavior during the interviews. Visitors who discovered how to drive the platform by themselves, learning from their mistakes, said in the interview that they had enjoyed this experience of discovery, reaching a *"eureka"* moment that made them appreciate the experience even more.

Visitors who asked the museum staff for help mentioned this in their narrative. Some visitors couldn't understand how to use the platform and left without asking for help. This happened more often in the case of visitors who were on their own and were the first to enter the empty space. When sequences occurred one after another, with no intervening idle session, visitors were able to watch other visitors or be helped by them.

The most common way of learning how to use the platform was by observing previous visitors and asking them for help. Drivers were generally observers in previous sessions who had learnt by observing the previous driver who had relinquished his position on the platform to give others the chance to operate it. The role of driver-observer was also played in pairs, within a family or group when different people tried one after another. The collaborative driver-observer interaction when the previous driver gave someone else a turn on the platform, changing role and helping, was observed also among visitors not belonging to the same group, who met in the space for the first time. When driving the drivers tried, whenever possible, not to have people between the projector and the projections but this was not always possible, especially when the room was full. Observers tried to avoid getting between the projector and the projection, moving around bearing in mind the direction the platform was rotating in. The driver not only changed the content of the projections but also the position of the visitors in the space.

Performers adopted a different strategy, playing with the content chosen by the driver.

In general it was the children who played with the projections, simulating walking in the virtual landscape and trying to touch the animations. The performers changed the observer-driver interaction, taking a more active role, generally making them both laugh.

The drivers chose what to explore on their own or negotiated this with other visitors. Some visitors played the role of navigator, suggesting which panorama to explore. Driver-navigator interaction was in general collaborative; however, in a few cases the driver decided not to follow the navigators' suggestions.

The driver-jumper interaction was generally collaborative too; the driver moved the platform with someone sitting/standing in front of him/her but this did not seem to cause any problems. In some sessions the driver invited other visitors to jump onto the platform, in other cases visitors spontaneously chose to do this and take on this role in the performance.

Jumpers often forced the anti-jumpers to enter the space: this was a negative interaction, as the anti-jumpers asked the jumpers to get off the platform. The role of the anti-jumpers was played by the members of the museum staff because of what they has been told to do by the customer service manager or because they knew that the platform would break if too much weight was placed on it. This behavior was cross-cultural, observed at all the museums where PLACE-Hampi was part of the exhibition. The manager of the customer service in Melbourne asked if this behavior had been found only in Australia but it was observed also in Germany. However, in Karlsruhe there were no anti-jumpers; the museum staff let visitors jump onto the platform and drivers invited others to get on too.

Stoppers interacted with others, asking them to end their visit to PLACE-Hampi, in a voluntary (e.g. a mother asking her child to move on to another room or a customer service member saying that the museum was closing) or involuntary (a baby crying and the mother leaving with him) way.

3.3 Theorizing

All these roles and interactions between roles confirm what Paolo Rosa (2004, cited in Balzola and Monteverdi, 2004) said about the work of designers and artists when they design an immersive experience: they are "designers of relationships", object-event interactive, creating relationships between the object and the visitors and among the visitors themselves who become actors in a new kind of "collective set", or "theatre" (Kenderdine defines PLACE-Hampi as a new form of theatre for embodiment while Studio Azzurro defines their work as "ambient sensitive"). The visitor is a "spect-actor" (Georges Dyens), a visitor with the dual role of spectator and actor: in this case I defined how the visitor can be both spectator and actor in different ways, playing different roles with different plots.

This analysis shows that the form of "interactivity" at PLACE-Hampi is innovative, an advanced form of "dialogical interactivity" (Witcomb, 2003); a "theatrical interactivity", based on roles.

Considering what the designers wrote in their papers and what they said during their interview, this form of interactivity was in the designers' intentions because Kenderdine (2010, p 411) wrote that PLACE-Hampi is "exploring the dynamic series of relationships like a performance in the cybernetic theatre". In her book (2014, p 223) she also writes that "analysis often neglects the primary communication that occurs between people in the real-world as together they perform the act of spectatorship or participate in the virtual".

For Kenderdine (2014, pp. 223-225), comparing PLACE-hampi with the theatre, the key aspect is not only the visitor-system interaction as a performance, but also the "awareness of others", the awareness of being at the center of the spectators' attention: the person driving the platform knows that he is exploring the content not only for himself but also for other visitors. This "social" element of the interaction was an intentional and important part of the interaction design of PLACE-Hampi.

My research contributes to the debate about interactive design and museum studies, categorizing by role and describing relationships as interactions between people playing different roles; it also offers the possibility of describing in detail the quality of the relationship and of understanding in more depth the intention of the designers, what happened and how it happened during visits by all the types of visitors, and not only by the "model visitor" (the visitor as imagined by the designers, Tota, 1998). Kenderdine (2014, p 95) listed 8 modes of interaction envisaged by herself and Shaw for PLACE-Hampi: prosthetic vision, acoustic immersion, kinaestetic activation, inhabitation and dwelling, travelling, driving, walking and dynamic contemplation. My list, based on 1000 hours of observations at three venues and re-organized by role, describes all the possible modes of interaction at PLACE-Hampi, some foreseen by the designers and developed with a specific design choice, and some unexpected ones resulting from the visitors' interpretation of the space, the platform, their role and other visitors' roles.

During the first Museum and the Web Conference Asia, Nancy Proctor (2012) asked Peter Samis if there are new ways of categorizing "types of users". He (2008) proposes a categorization of museum visitors by motivation (for example, "social animals", visitors who go to museums because they enjoy social events; "experts", visitors who go to museums to learn more about a specific content, etc.). At the Visitor Studies Group UK conference 2013, Ann Nicol, head of learning at WWT (Wildfowl and Wetlands Trust), presented a similar categorization again based on why and how visitors visit museums, including new categories such as visitors who go to museums or heritage sites to relax and contemplate the beauty. This category is not included in Samis' categorization of visitors' motivations. To contemplate, to relax and enjoy the beauty were behavioral patterns observed and described also during interviews with PLACE-Hampi visitors and the museum staff.

Comparing roles with previous theory about "culture" and considering culture as a mix, as dynamic, as a result of many negotiation processes (Fisher, 1986), there is no evidence in my data that visitors chose a role depending on their "culture". Looking at the data from all the venues (Germany, Australia) it can be seen that visitors made decisions dynamically, based on their interpretation of the space and technology. Visitors in the same context and with

the same original "home" (e.g. Germany, Australia) chose different roles. The patterns of interaction seem to confirm what the designers aimed to do: to design a cross-cultural platform for a potentially international audience. This cross-cultural analysis will be discussed in more detail in the paragraph below.

The only exception is a special subcategory of observers who I called "contemplators": visitors, in general observers, but sometimes also drivers, who were "contemplative". This category falls somewhere between the categorization of technology and of content because visitors in contemplative mood were generally Hindus, whose original home was India, or visitors whose emotional home was India and who interpreted the content and the space as sacred, because it is a representation of Hampi, a sacred place for Hindus. A Greek visitor in Berlin played with the Shiva animation 3 times until another German visitor asked to see other content. This is an example of driver-observer interaction where the observer becomes a navigator, asking to see other content. The Greek driver told me that he enjoyed seeing Shiva's dance, he mentioned the name of the dance, he described the meaning of the dance and he said that he had been to India several times. This was an example of immersion by transportation in the narrative, of contemplation and about how visitors who operated the platform were connected with the interpretation of the technology and the content.

Comparing these roles with previous theory on interpretation in museum, they can be seen as a sort of "interpretative community" (Fish, 1980, Hooper-Green Hill, 2007) because visitors chose a specific role, based on their interpretative strategy and interpretation of the space and the platform.

4 Roles and the cross-cultural design approach

How does this analysis by role challenge the assumption of cross-cultural design based on national cultural dimensions? In this paragraph I will describe the cross-cultural design approach and I will then compare it with what emerges from my data and the categorization by roles.

4.1 Roles and the cross-cultural design approach

The cross-cultural design based on national cultural dimensions approach was proposed by Marcus, Gould (2000) and Baumgartner (2003), linking five design dimensions with the national cultural dimensions of Hofstede. These three authors proposed a 5x5 matrix to analyze design by national cultural dimensions. The five dimensions for interface design used in the matrix are:

- Metaphor: easy recognition of a concept through words, sounds and images;
- Mental model: appropriate organization and representation of data, functions, tasks and roles;
- Navigation: efficient movement within models through menus, dialogue boxes and control panels;
- Interaction: effective input/output sequencing, including feedback and the overall behavior of human-computer systems;

- Appearance: quality perceptual characteristics.

Hofstede's dimensions are:

- PDI (power distance): the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally;
- UA (uncertainty avoidance): the extent to which members of a culture feel threatened by ambiguous or unknown situations;
- IND (individualism): this stands for a society in which the ties between individuals are loose: everyone is expected to look after himself and his or her immediate family;
- MAS (masculinity): this stands for a society in which emotional gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on material success; women are supposed to be more modest, tender, and concerned with the quality of life.
- LTO (long-term orientation): this stands for the fostering virtues oriented toward future rewards, in particular perseverance and thrift;

In this paper, I will not consider LTO, because Hofstede himself no longer uses it in his dimension (Hofstede cultural center, 2014).

Marcus and Gould (2005) link design and cultural dimensions in this way, proposing bipolar solutions:

The implication of this approach is that within the same nation, such as Germany or Australia, we should expect visitors to act in a homogeneous way and in different ways if we compare the two nations with different cultural dimensions and that the designers should be aware of this when designing

Table 1: Cross-cultural Design

Cultural dimension	Design dimension	High	Low
PDI	Metaphor	institution building; with clear hierarchy; schools, government, monuments, etc.	Institution, building with equality, options, play/games, public spaces, etc, etc.
	Mental model	Reference data with no relevancy ranking	Less structured data with relevancy
	Navigation	Restricted access, choices, authentication, password	Open access, multiple options, sharable paths
	Interaction	*No indication*	*No indication*
	Appearance	Images of leaders, nationals; official music, formal speech	Images of people, daily activities, popular music, informal speech

UA	Metaphor	Familiar reference to daily life; representation	Novel, unusual references, abstraction
	Mental model	Simple, clear articulation, limited choices, binary logic	Tolerance for ambiguousness, complexity, fuzzy logic
	Navigation	Limited options, simple, limited controls	Multiple options, varying, complex control
	Interaction	Precise, completed, detailed input and feedback of status	General, limited or ambiguous input and feedback of status
	Appearance	Simple, clear, consistent imagery, terminology, sounds, highly redundant coding	Varied, ambiguous, less consistent imagery, terminology, sounds
IND	Metaphor	Action oriented	Relationship oriented
	Mental model	Task oriented	Role oriented
	Navigation	Customizable	Role driven
	Interaction	Individual path	Group oriented
	Appearance	Image of products	Image of groups
MAS	Metaphor	Sport oriented	Family oriented
	Mental model	Task oriented	Role oriented
	Navigation	Limited choice	Multiple choice
	Interaction	Game oriented	Function oriented
	Appearance	Masculine colors	Feminine colors, acceptance of cuteness

digital media, linking design dimensions and cultural dimensions, depending on their future audience.

We can see this in more detail if we compare Germany and Australia using Hofstede's approach and later see what happened in the field. It is possible to compare "countries" by national cultural dimensions on the Hofstede cultural centre's website, (http://geert-hofstede.com). I have summarized the

comparison between Australia and Germany in a table (Table 2), based on Hofstede's first four dimensions (1967, 1973), not considering LTO but taking into account the two more recent dimensions added to his model by Minkov (2010), Pragmatism and Indulgency. These two dimensions are defined in this way:

Pragmatism: this dimension describes how people in the past, as well as today, relate to the fact that so much that happens around us cannot be explained. In societies with a normative orientation most people have a strong desire to explain as much as possible. In societies with a pragmatic orientation, most people don't have a need to explain everything, as they believe that it is impossible to understand fully the complexity of life.

Indulgency: this stands for a society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun. Restraint stands for a society that suppresses gratification of needs and regulates it by means of strict social norms.

Comparison of Germany and Australia using the Hofstede centre's website:

4.2 What was observed in the field

Table 2: Comparison of Germany and Australia (based on the Hofstede Centre's online tool)

Dimension	Australia	Germany
Uncertainty Avoidance	Australia scores 41 for this dimension and is a fairly pragmatic culture in terms of uncertainty avoidance.	Germany is barely among the uncertainty avoidant countries (55); the score is at the high end of intermediate, so there is a slight preference for uncertainty avoidance.
Power distance	Australia scores low for this dimension (27). Within Australian organizations, hierarchy is established for convenience, superiors are always accessible and managers rely on individual employees and teams for their expertise.	Highly de-centralised and supported by a strong middle class, Germany is not among the lower power distant countries (score 26).
Individualism	Australia, with a score of 99 for this dimension, is a highly individualistic culture.	The German society is an individualistic one (72).
Masculinity	Australia scores 62 for this dimension and is considered a "masculine" society.	With a score of 68 Germany is considered a masculine society.
Pragmatism	Australia scores 22 for this dimension and therefore has a normative culture.	Germany's high score of 57 indicates that it is a pragmatic country.
Indulgency	With a high score of 71, Australia is an indulgent country.	The low score of 40 for this dimension indicates that the German culture is restrained in nature.

German visitors (visitors with original home Germany and long-term home Germany) in Germany and Australian visitors (visitors with original home Australia and long-term home Australia) in Australia did similar things inside the same immersive environment, contrary to what we should expect if we consider the Marcus and Gould matrix (2005).

In terms of what we can expect from cultural dimension and the link with design dimensions, both countries are classified as places where people avoid UA; however, from what was observed in the field, visitors were in general not afraid to use an explorative navigation model.

Both countries are classified as high for IND yet visitors helped each other to use the platform and collaborated during the experience, also when they were part of different groups or came to visit the exhibition on their own.

In Germany and Australia MAS is high, according to Hofstede, yet in both museums women often took the role of navigator or driver; however, in both countries, women were more sensitive to the fact that other visitors were waiting to use the platform and gave up the role of driver to give other visitors the possibility of trying the experience.

In both countries visitors expressed their appreciation of the environment, the music or the beauty; this is also contrary to what we should expect considering that the two countries are very different in terms of Indulgency.

Visitors did not act in the same ways within the group of German visitors in Germany and within the group of Australian visitors in Australia; they were not a homogenous group and acted in different ways. As regards the interpretation of the space, some visitors chose the role of driver, taking control of the platform, while others from the same country chose never to drive it and remain an observer. The decision was not influenced by their nationality; some specific behavior, such as playing with animations, was common in both countries for visitors of the same age (children); however some adults also played with the animations or gave a small performance in the space such as dancing (for example a group of students in Australia and a group of employees from the same company in Germany).

Due to the limits and contradictions that emerged, the cross-cultural design approach is not useful in understanding visitors' behavior in immersive environments. Using a bottom-up approach and categorizing behavior by code, the roles played by visitors emerged as a tool to describe what can happen when an immersive platform is located in different museums and countries and to compare visitors' behavior in different settings.

In the interpretation of content, not the space and the technology, a very important difference emerged between visitors observed in Germany and those observed in Australia: this is not discussed in this paper but analyzed in another one (Schettino, 2013), using the concept of "home" and interpretative communities, and not the concept of national cultural dimensions. Above all in Australia, the combination of original home, long-term home and emotional home were useful in better understanding the visitors' interpretation of the content. Combining an analysis by home for the content and by role for the technology can be a re-usable strategy for future studies of immersive experiences in museums.

5 Conclusions

PLACE-Hampi is an "open work" (Eco, 1962) and a "theatre" for embodiment (Kenderdine, 2013), where visitors, choosing a role, can engage with other visitors, objects and avatars in a new form of interactivity that I have called "theatrical interactivity", comparing this new form of interactivity with the three forms described by Witcomb (technological, spatial, dialogical, 2003, pp. 128-164): visitors, based on their interpretation of the space and the "mysterious multi-layered object" in the middle of the room", can choose to play a role (driver, observer, performer, jumper, anti-jumper, stopper, navigator) or multiple roles and, based on those roles, they will "act out" a collaborative performance, interacting with other visitors, the customer service staff, the machine, the physical, virtual and augmented space and the animations. Kenderdine (2007, p 64) calls the visitors' experience of PLACE-Hampi as a *"performative encounter"* with an audible and visual landscape. The designer offers visitors the possibility of "transforming myths into the drama of the first-person narrative by their actions within the virtual landscape and through the creation of a virtual heritage embodiment".

This form of interactivity, based on the designers' intention to offer visitors the chance to create their own narrative by selecting their own path and to use public spaces such as museums in a new way where people can meet and collaborate with others, seems to accomplish what multimedia does not generally accomplish in museums: i.e. create a more "democratic and open medium of communication" (Witcomb, 2012, pp. 580-589). In PLACE-Hampi, visitors produce meaning in a collaborative way by choosing how to interact with the technology, with the content and with each other. This was one of the goals of the project: "to animate a resocialization of public space", by giving visitors the chance not only to interact with space and avatars, but also with each other (Kenderdine, 2010, p 411) and to choose their path and never "to experience the same thing twice" (2010, p 411). Visitors who returned to see the exhibition several times described how, even when they came back five times, they had five different experiences with different people, exploring the exhibition in a different way and going home with a different understanding of the total experience.

The design strategies to take into account diversity and the analysis of the impact of those strategies on visitors' interpretation challenge the cross-cultural design approach, showing the limits of the use of national cultural dimensions in the design field and proposing a categorization of visitors' behavior by role.

It is important to say that Hofstede himself (Amsterdam, 2007) criticized studies that apply his national dimensions, designed for macro research goals in the area of organization studies and management, to microanalysis and also to design.

The results of this research show that some of the Germans' and Australians' behavior was cross-cultural (for example, in both countries some of the visitors chose to group together on the platform); other behavior (exploring the platform or asking for help) was not based on nationality but on other personal preferences and characteristics (for example, age).

The categorization with this list of 8 specific roles offers a new approach to categorizing types of users, specific to immersive environments, to make sense of their interactions in the space. The same approach based on roles can be used in other analyses of visitors' behavior in immersive environments in museums, especially in those designed for more than one user, in order to understand how visitors interpret space and technology in museums.

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EXPERIMENTING WITH CULTURE, TECHNOLOGY, COMMUNICATION: SCAFFOLDING IMAGERY AND ENGAGEMENT WITH INDUSTRIAL HERITAGE IN THE CITY

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Keywords: *social media, distributed museum, youth participation in design*

Abstract: *This paper takes root in how social media represents new frameworks and forms of communication, and how designing for the new meditational encounters with these media require interdisciplinary perspectives from both the humanities and cultural studies. We argue that involving people with social media as a participatory platform requires that designers take into consideration users visual interpretations, social semiotic, semantic and spatial practices, that are inherent in social media usage. We report from a design research project where everyday users in an urban environment were involved in small-scale experiments with cultural heritage data using the photo sharing mobile platform Instagram. We propose to focus on these acts of mediated dialogue as important cultural elements for participatory involvement as a potential design development method.*

1 Introduction

In this paper we reflect upon how cultural aspects frame young peoples engagement with social media based museum communication, and how their existing practices with social media may then inform the design. Our intention is to better understand how co-design processes may implement social media as a design space to explore methods for distributing museum content reminiscent of young people's information sharing practices today. Museum institutions are distinguished in that technologically-mediated museum content goes beyond information exchange to provide audiences with new opportunities and forms of sense making, memory and identity creation, in addition to new senses of belonging. In our view, this value-based practice requires designers in participatory design and co-design processes to extend their interdisciplinary perspectives, and involve perspectives on mediation from the humanities.

Engaging young people with social media through co-design means to understand their cultural practices (Stuedahl & Smørdal 2011, Lowe and Stuedahl 2014). It requires designers to understand how visual and semiotic aspects of contemporary communication influence young peoples engagement with technologies. We will in this paper describe how perspectives from cultural studies and social-semiotics were included to engage people in a co-design experiment employing the photo sharing application Instagram. We will discuss how we adapted concepts and perspectives from semiotics and

multimodality to engage young people with images from today and from the past along the Akerselva river in central Oslo city.

The research project's objective was to explore how the merging between the institutional practices of the distributed museum (Bautista and Balsamo 2011) and the existing digital practices of young people in the city may take form related to the history of the Akerselva river. The goal of the design experiment was to explore how young people would relate with industrial history from the past in their present place based activities, and how their everyday practices with mobile technologies may support designerly ways of exploring these relationships. This design experiment also illuminated questions concerning how to design for young peoples media based participation that went beyond the specific case of industrial heritage along the Akerselva river. The project directed our focus into how central aspects of co-design and participatory design are challenged in the realm of social media and digital practices. When it comes to designing within social media spaces, our experience advises that to motivate young participants through social media, designers have to master their communication practice so that the design set up is performed in ways that engages the youth (Lowe & Stuedahl 2014). In this way designers need to conduct an anthropological design approach, that puts weight on the reflexive engagement with concrete experience and the intrinsic relation between knowing and doing (Otto & Smith 2013). Therefore our focus in this paper is on how the visual and social semiotics of social media practices requires an integration of perspectives from cultural studies.

2 The Akerselva River project

The Norwegian Museum for Science, Technology and Medicine, together with the Oslo City Museum and Oslo City Archive embarked on a project entitled Akerselva Digitalt with the objective of establishing an active museum communication practice outside of the museum walls. More specificially, along the Akerselva river. The river is central for the industrial development of Norway, and the buildings and sites that lie along its path are physical reminders of the relationships between social history, industry and energy production. Today, the walkway along the river may potentially give insights and understanding of the central cultural, economic and societal transformations in Norwegian society over the past 150 years. The museums have previously communicated this history by arranging city walks, allowing access to online portals with documented industrial history, published text books and participated in cultural events along the river. Building upon a recent mobile audio guide, the museum invited researchers to explore how the system can be further developed into a socially-driven mobile platform – engaging visitors through participatory activities. The design research team implemented design interventions to explore the aesthetical, cultural and social challenges and potentials that museums may meet when integrating social technologies in mobile and distributed communication practices outside their building walls. As a specific parameter, the design experiment focused on exploring how museum content may be staged for encounters in city contexts, in popular culture settings and with young visitors who would perhaps not encounter the history in a physical museum space.

In investigating how the cultural heritage content may be meaningful and relate to the cultural activities of user groups along the Akerselva River, the research focused on practices within everyday use of mobile phones along the river. We observed that the river was a walking location where the mobile phone was used for photographing, and discovered that the Akerselva river had several active streams on Instagram. The #akerselva at Instagram was a well published stream gathering natural as well as social and culinary experiences along the river. An open-ended design process was planned that iteratively explored the forms and types of engagement inherent to Instagram and how such engagement related to activities of walking, strolling and using the river for pleasure.

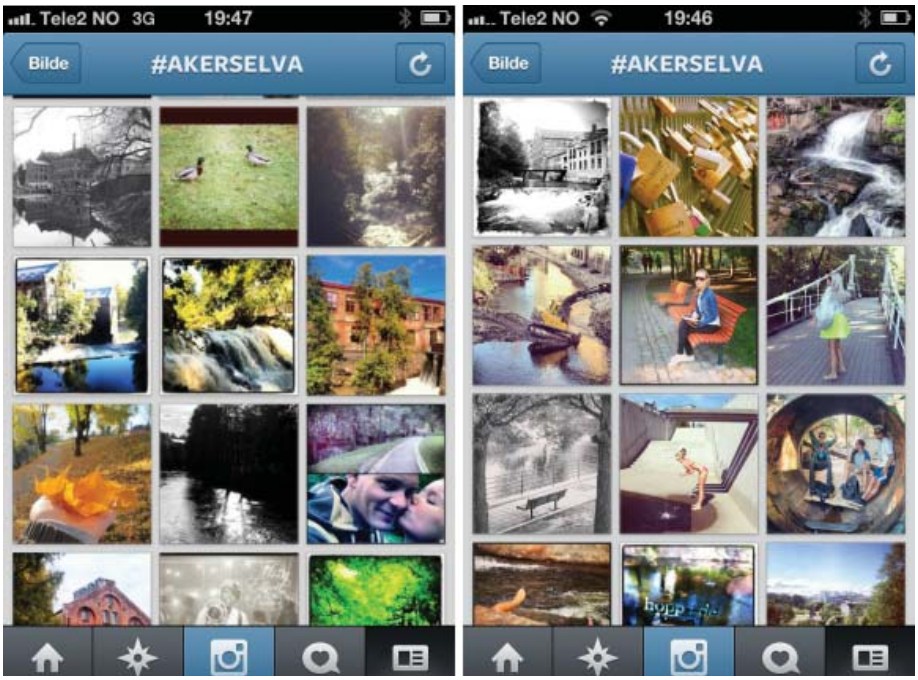

Figure 1 #akerselva at Instagram seemed to gather young people in sharing their natural as well as social and culinary experiences at locations of Akerselva river

Overall the research aimed to capture the ongoing dynamics of young peoples engagement with the river to find potential ways distributed museum communication could take place. The reflexive iterations of the project were divided into 7 small-scale experiments that each informed the further development of the whole. These iterations used well-known participatory methods such as scenario, mock-ups, cultural probes and narratives involving museum staff and curators, local youth in out-of-school clubs and a hip-hop club situated along the river.

Here we will focus on the last iteration, where we engaged Instagram as a design space for exploring how historical museum content might merge with existing online photo sharing practices. We encountered two challenges in staging this design experiment: To be able to set up the design experiment in Instagram, we had to understand the semiotics of Instagram as a vehicle

for communication. Secondly, we had to understand the hybrid relationship between both onsite and online practices of Instagram-users. These two challenges were evident in two of the design experiments we conducted. We identified the following cultural studies perspectives needed in complementing the experiments:

- Challenge: Semiotics of participation. For designers to engage in participatory activities within social media communities a sensitivity to not only the ongoing social dynamics but also the cultural practice that is shaped through performing with semiotic and visual language and the resulting identities is required. Cultural studies perspectives help to frame this performative, symbolic and social sense making levels of signs and codes that characterize online communities. To engage young people by relating to their cultural practices, this semiotic language become central tools for facilitating users engagement with the online experiment on Instagram.
- Challenge: Digital and physical engagement. Understanding young peoples experiences of the intertwining digital and physical experiences using social photo-sharing technologies became an obvious need. Imagery is a material and place-based constant directly tied to place. Within Instagram, a digital layer is introduced that involves new forms of interpretation closely aligned to the intertextuality existing between online representations and embodiment of use, creating a newly distinctive experience. It became essential to understand how people used digital imagery in relation to their place-based practices and performances.

Our design experiment is part of a longitudinal interest in how cultural studies and cultural analysis can support designers in taking into account the micro-level of participatory processes (Stuedahl 2002, Stuedahl et al. 2010). The Akerselva case demonstrated the need in design to further develop design methodologies that capture the complexity of cultural and social layers that are inextricably embedded in communication technologies. We see a need to understand how these cultural and social layers of opportunities within museum design may open new relationships between a museum and its visitors.

3 Background and related research

Participation in the design of cultural heritage is an emerging factor in several research fields concerned with experiences and learning in museums, science centers and memory sites. We will briefly point to aspects from three disciplinary approaches; museum design, participatory design and cultural studies that were relevant for engaging young people in our design experiment.

3.1 Designing for the distributed museum

Contemporary re-conceptualization of museums include efforts to build new relationships to society and thereby new relationships with the museum visitor (Vergo 1997, Davies 1998), taking the museum beyond the walls and grounds

of its physical location (van Mensch 2005) into a distributed museum space that is not defined by any clear boundaries (Bautista and Balsamo 2011). The distributed museum paradigm relates to the paradigm of the participatory museum (Simon 2010), and introduces digital technologies as offering new opportunities for reimagining interactions within cultural heritage content. New scales and dimensions shape a continuum of visitor interactions with cultural heritage extending from fixed, physical and material locations in the museum to digital locations in mobile and virtual spaces, thereby extending this newly defined museum space (Bautista & Balsamo 2011). These new dimensions greatly shift the implications for curatorial structuring and redefining of the museum visitor experience, and require a fundamental change of museum design to go beyond providing a more or less attractive medium for presenting content (Macdonald 2007), into museum design as an implication for making museum content relevant within a variety of social contexts.

Mobile communication in museums has its predecessors in handheld technologies that long have been used for guiding and giving access to information within museum exhibitions (Aoki et al. 2001, Filippini-Fantoni 2008, Hsi 2008). Lately, museums have embraced mobile phones for their ability to enhance a visitors co-compositional activities by for example, sharing photos (Arvantis 2005, Stuedahl & Smørdal 2011 a &b), to restructure, contextualize and personalize their museum visit (Kahr Højland 2011), or to support visitors in their social activities with peers (Hsi 2002, Walker 2008, Vavoula et al. 2009). Amateur image-making, or "Photography 2.0" practices expand interactions in relation to the museum content (Galani & Moschovi 2010). Applications such as Tumblr and Pinterest, and photo sharing databases such as Flickr, have given museums the opportunity to establish extended relationships with online communities of interest (Colquhoun & Galani 2013, Dalton 2010). Visitors are engaged in the correcting, contextualizing, complementing, and co-curating photographic historical content, and do help to increase the quality of museum`s own collection (Oomen & Aroyo 2011, Colquhoun and Galani 2013). More recently, the use of Instagram provides visitors new possibilities of re-categorizing museum objects and re-configuring the exhibition environment through their own personal media (Hillman et al 2012, Weilman et al. 2013).

This new relationship between museums and society introduces the integration of multiple "voices" (Black 2010), but also recasts questions about control, authority, ownership, voice and transparency within museum communication (Knell 2003, Russo et al 2008, Stuedahl & Smørdal 2011a, Stuedahl 2011). This requires museum design to go beyond issues of representation in exhibitions, and to focus on using experiments to explore possibilities, limitations and practical consequences (Basu & MacDonald 2007). Introducing social media to support visitors participation in museum communications reinforces such experimental approach to museum design. Our suggestion is to involve visitors as design participants at an earlier stage of design to explore how participatory social interactions with museum content may unfold and make sense. This in relation both to the visitor and the museum professional, The design activities have to interleave knowledges and values from both of these usergroups in ways that in PD would have been conceptualized as artful integration. In our design experiment, Instagram was explored as a design space to intervene in young peoples engagement in a specific locale to

find possible ways future museum encounters in the context of the city could be shaped to matter for young peoples reflection on conditions of time.

3.2 Participatory Design and social media

There is a broad scale of design methods to address the needs of connecting everyday cultural and social practices with digital technologies through design research discussions (Sanders & Stappers 2008). Several projects within the field of participatory design (PD) act on theories from cultural studies to frame participatory design projects in alternative ways in order to understand democracy and politics (e.g. Björgvinsson, Ehn, Hillgren 2010 based on Mouffes theories on democracy). This positions design as a provider of democratic entry into innovation, serving as a feature capable of opening up spaces for empowering users to question democratic futures and possibilities for building one's own capacity for change (Botero & Saad-Sulonen 2008, Di Salvo 2009, Björgvinsson, Ehn, Hillgren 2010). Some of these also focus on the museum and provide an argument for how visitors may be involved in exhibition development at an earlier stage (Taxèn 2005, Stuedahl & Smørdal 2011, Smith 2013).

PD has recently drawn attention to social technologies as alternative sites and tools to support design processes "in the wild" (Diettrich et al. 2002, Lievrouw 2006, Brereton and Buur 2008, Hagen and Robertson 2010, Følstad et al 2012, Reyes and Finken 2012). Social technologies open up participatory design processes to everyday people, revealing the relationship between design and use, making visible how design is actualized in use (Hagen and Robertson 2010). For this, social media is proposed as a space for design supporting a 'seeding' strategy, an endeavor to embed the future into existing contexts of use (Hagen and Robertson 2010b).

This 'seeding' strategy, has been central for our use of Instagram as a means for exploring possible social interaction and digital engagement with museum content. Using Instagram as an existing cultural practice for the participatory project, we needed to clarify how such PD related to the ongoing practices – and how to 'seed' the idea of photosharing participation with the cultural heritage content. This extended the focus from how to motivate people to participate in the project, into considering how the project may integrate existing practices across young people into the design space. We needed to explore how social semiotics, semantics and modalities constitute young people's communicational practice and participation within specific social media. For this we needed to apply concepts and perspectives from cultural studies and semiotics.

3.3 Cultural studies relevance to social media and participatory design

Visitor engagement in the Akerselva Digitalt project was framed through cultural studies concerned with the questions of shared meanings and semiotic ways of meaning making. Ways in which the signifying practices of media and representation are not neutral or a priori given, but constitutive of the processes of how meaning and knowledge are shaped (Barker 2012). There is a growing body of literature in interaction design, HCI and communication design that involves theories from cultural studies to frame how aesthetics, nar-

rative and rhetoric play a role in one`s participation in digitally mediated communication (e.g. Liestøl 1999, Morrison 2003). This includes studies on how semiotic resources become an integrated part of one's multimodal production and understanding of expressions and concepts (Kress and van Leuwen 2001); how elements of sign systems are used together to create meaning beyond the individual elements in multimedia authoring interfaces (Bardzell 2007); how people use style and photos to give texture to their entries (Cohen 2005); the way features of media builds in relation to social practice and establishes a genre that users may recognize (Miller and Shepherd 2004, Liestøl 2005); and how cultural context influences a designer's textual production and mediation (Morrison and Skjulstad 2010; Skjulstad 2007). These representational, mediated and performative aspects of digital artifacts that cultural studies provide (Morrison et al 2010) suggest the mediating artifact to not only refer to text and media types, but also to what the designed artifact signifies and communicates symbolically and how this relates to social and cultural practices of sense making.

The major body of literature in the participatory design field does not discuss these meditational levels of engagement with social technology. We argue that PD projects that go outside defined design settings and apply social media as a means for involving and engaging users need to take these aspects of meditational practices into account. And that designers, in one way or another, have to take into account how users understand the signified and symbolic level of the dialogue that designers pursue when engaging people in social media based design processes. This performance of the designer is what became the major challenge of engaging young people in the Akerselva Digital project.

4 Case study: THE AKERSELVA DIGITALT DESIGN EXPERIMENT

The design experiment with Instagram was performed in two stages, each with a different focus; A digital phase where we established an Instagram user called @akerselvadigitalt, and explored how images from the museum archives could take a meaningful role in relation to the semiotic conventions of the streams in Instagram.

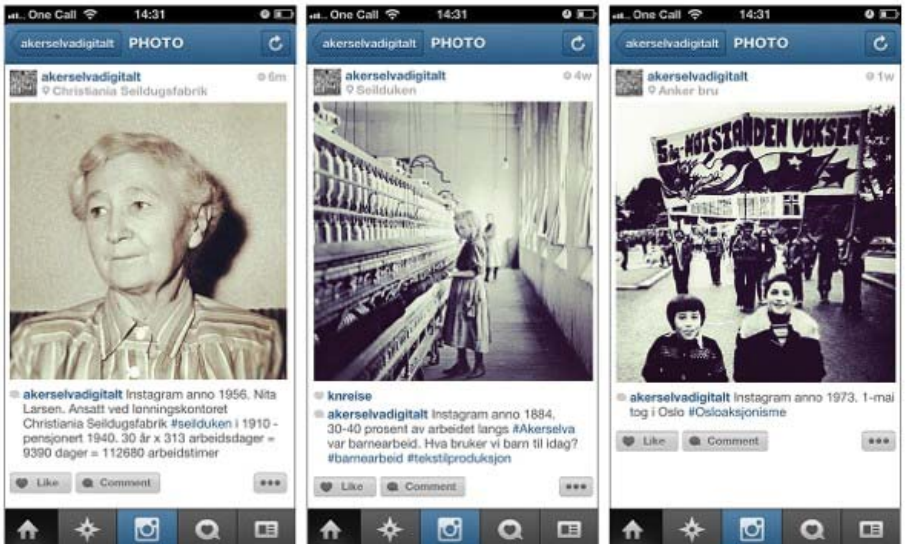

Figure 2. Posting photos from museum archive required decisions on how designers may intervene in ongoing cultural practices on Instagram

And a physical phase, where we explored how experiences with Instagram may be made analog within a physical location at an event along the river. This in the form of cards with QR-codes and IPADs hanging in trees at the river providing access to the online stream published by @akerselvadigitalt. Both experiments were undertaken across a two-month period in September and October 2012.

Figure 3. The physical installation gave people access to the photostreams in Instagram, and gave us opportunity to observe how links between images and the locations were made.

Conceptualizing participatory design as a method to explore visitors' social and cultural practices with social technologies introduces the need for design sensitivities to connect to participants' existing practices. The role of the designer and the tools, toolkits, techniques, methods and approaches (Sanders, Brandt and Binder 2010) has to be re-thought and adapted to the practices of users. Bringing visitors everyday content into the museum communication, as described in other museum PD projects, is quite a different endeavor than bringing museum content into the everyday practices of people in the city, as we tried in the Akerselva Digitalt case. The project needed to ask deeper questions of use that involved the intention, sense making and outcome of Instagram use, and how this could be accommodated in a future mobile and social platform for engagement with historical information along the Akerselva river.

We set out informed by an overall cultural studies understanding of culture as based on sense making practices that are not only shared social systems but involve contrasts, resistance, oppositions and tensions (e.g. De Certau 1984). For example, visual signs and images make meaning by both resembling and differing from the things they refer (Hall 1997). This led us to focus our design participation and interventions on Instagram on ways to generate postings that both resemble – but also contrast – existing social practices of "Instagramming". Posting images that contrast, and runs counter to existing practices on Instagram involved a sensitivity to aspects of visual communication that cultural studies brings forth.

Figure 4. Creating an identity for @akerselvadigitalt was based on what was posted, how the posting related to the stream and the choices of hashtags. The Instagram stream #akerselva on the left and the stream of museum photos from @akerselvadigtalt user on the right.

4.1 Challenge: The Semiotics of Instagram

The design experiment centered around how historical images from the museum could be posted in ways that both respected the existing practices of the stream and framed the historical images in the stream in a communicative way. This required reflection upon how the social and semiotic levels of publishing, liking and following, framed participation in the stream. And how we, as designers, had to relate this to the institutional concerns that we accompany the museum content. This involved making choices of photos, create prompting texts that would relate to contemporary context and locations along the river, and creating hashtags that afford the photos social relevance. To enhance the social activities of each photo it required the identification of semantic connections into multiple streams and to compose clusters of hashtags that internally would work in concert with the signification of the photo.

During the first month the experiment posted approximately 60 museum images. The study is based on multiple methods for documenting the process; in addition to notes of our own discussions during the experiment, we included observations, comments and reactions from followers on Instagram as empirical material, and subsequent interviews with followers conducted over Instagram. The historical images in question were provided by the museums involved in the project. In Instagram we encountered a challenge in that we had to translate and connect the institutional metadata of the archival images with the existing folksonomies that were connected to place in Instagram.

Mixing such social tagging and folksonomies with the structured metadata of an institutional classification system has become a major discussion as institutional memory content mixes with the social processes of online communities (Trant 2009, Dalton 2010). It is in this turn, the mixing of curatorial content into everyday amateur content, that arises a potential challenge for participatory engagement in Instagram. The museum content had to relate to existing practice of 'hashtagging', but needed to keep some of the information that the photos had in the archive to be remain meaningful and accurate. The right choice of hashtags for an image could directly provoke and direct reflections onto historical issues. This required a translation of archival information into text and hashtags. Each published photo contained excerpts of the museum archival information including the year the photo was taken, the name of the photographer and the name of the photographed person, if the archival information allowed so. If the photo had locational metadata, we created hashtags based on these as well.

We also added a sentence or a prompting question relating the historical content to the present day, generating a point of tension. For example, one photo from the Seilduken textile factory from 1956, pictured Nita Larsen who had been a payroll officer at the factory from 1910 to 1940. This archival information was distilled down to contrast the context which was not yet accounted for in the archiving process; we translated Nita's 30 years of employment into the number of days and hours at the same work desk, a concrete translation that was meant to strike a contrast with contemporary employment expectations. Today people hold several jobs during their labor lifetime, and staying in one workplace for 30 years would signal stagnation and not loyalty and steadiness, as in Nita`s time.

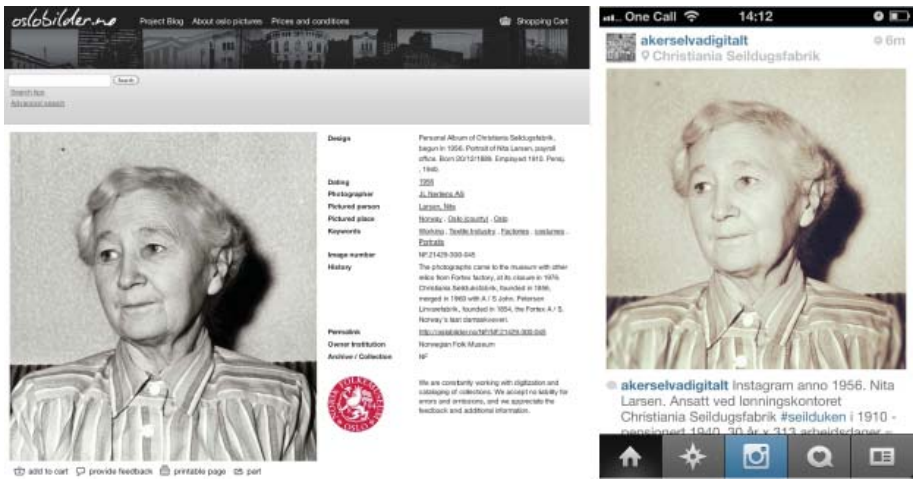

Figure 5. #seilduken. Hashtags became a semantic tool for both outreach and a potential prompt to trigger historical reflections on labor conditions for workers in the factories that today contains schools and creative industry. As a prompting text we used the number of working hours, 112680 that Nita Larsen had spent at the account desk during 30 years of employment.

The choice of hashtags assigned to each photo poignantly address reflections upon the specificity of the photo in relation to time and place. It was

an important tool to connect the ongoing social practices of place-making in Instagram to the historical sites and the social histories along the river. But hashtags of historical photos had to also connect to existing folksonomies that users applied to the same sites in their everyday social media presence. We decided on a multifaceted structure of hashtags, to focus on the multiple variables between museum content and Instagram users. All photos were tagged to the #akerselva hashtag, the main Instagram-stream connected to the river prior. In addition, clusters of hashtags that drew attention to other themes related to Akerselva history were place related, such as "#seilduken", one of the main factories – or to an historical phenomena, such as "#children labour" or "#osloactivism, #politicalprisoners, #russia", or more contemporary themes such as "#pussyriots, #mathallen (a new local food hall), #akerselva, #brenneriveien, #vulkanoslo" (the burgeoning design community and environment for creative industry in Oslo), or "#teknisk museum". The composition of each hashtag cluster was in this way a matter of connecting and reconfiguring the mediated content with contemporary reflections, and by this make it relevant for the social practices in various streams.

This design experiment illuminated the power of social semiotics via the hashtags and the descriptive texts that would affect a users relationship to the photos chosen from the archive. Accomodating young people`s engagement, contributions and co-creation of the photo streams required a design awareness that was deeply informed by knowledge of the social and semiotic character of practices of sharing, liking and following on Instagram. And thereby the cultural structures, systems and dynamics that participation on Instagram is dependent on. Understanding the social semiotic aspects of social technologies is not only a matter of analyzing peoples practices; the application of hashtags, questions that would prompt people to engage, and creating semantic connections is also a matter of designing to facilitate engagement throughout the design process. Engaging people in encounters with museum content outside a museum space reinforces the need for insight into the associations that museum content could encourage in other contexts and places. Such insight has to be acknowledged to succeed in setting up the design space in the first place.

4.2 Exploring digital and physical engagement

In employing Instagram, we opened a space for a participatory and experimental approach that examines equally the layers of personal, social, physical and digital interactions with the Akerselva river. However in the process, we uncovered a need for a design sensitivity in understanding the physical 'situatedness' of Instagram users to engage young participants in the design process in the first place. How does the physical location relate to young peoples engagement in the photo sharing and in what ways could this then trigger them to reflect upon place and time? How can the historical sites along Akerselva be appreciated as part of the imagery activities on Instagram and why would people bother? How is the production and viewing of images related differently to experiencing place? And how can narratives of people living and working in the buildings and factories in the past enhance an appreciation of

the sites today? While the ethereal quality of mobile digital space is less related to literal spatio-temporal properties, it does offer the possibility of re-mediation and re-configurations that earlier computer based technologies did not including new possibilities for combining the virtual and the real, where two sources of information generate a third, new type of knowledge experience. The digital experience still lies in the interaction, but comes to play in the interaction between the layers of digital representations and place (Liestøl 2010; Liestøl et al 2011). Young people`s digital imagery activities add yet another layer to these layers of representation through agentive making of experiences and defining of place.

Digital representations and recordings of cultural heritage brings to bear enormously increased reproductive and productive capacities which can then alter the thing being produced (Malpas 2008). Imagery, photographing and the production of representations can also been understood to have been set free from the world, and used as a tactic to construct meaning in acts of authoring and spectating (de Certeau 1984). Based on this, we can understand digital imagery in Instagram as a tool for people to redefine, reconfigure and reconstruct place and time. In Akerselva Digitalt, we saw this as acts of uncoupling and reassembling the history with its physical place. For example, the iconic historical bridge appears in many photographs and many people comment on the history of the bridge but with a contemporary twist. The design experiment in Akerselva Digitalt intervenes in several complex aspects of people`s imagery practices, where the reproduction and altering of cultural heritage definition itself requires more detailed studies. For the sake of engaging people in the participatory experiment, we stated the performative and essential relationships between digital and physical sources of information as crucial for staging the manners in which people can make sense of, and interact with, museum content.

To perform this physical focus we built an installation that provided access to our experiment's online stream, @akerselvadigitalt, by way of QR-code cards and online IPADs hanging in trees at the river. The physical installation was arranged across three sites along the river to carry out the experiment and obtain any observable empirical clues on how social practice with historical content may play out onsite. The goal of the physical set-up was to explore a) visitors experience with the cultural dynamics of Instagram related to place, and b) the media-based dynamics of social following which we will not focus on in this paper. Our intention in observing how peoples situated use of Instagram occurs was to evaluate the potential points and ways that museum content can connect to the context in the city as social place making activities.

It was decided to carry out the installation as a performance activity at the yearly riverwalk, or Elvelangs, that occurs on 21.September, the day of autumnal equinox. This event samples installations from artists, musicians and local people living along the river with up to 3000 people attending various parts of the 5-mile walk along the river beginning around 8 in the evening and lasting until 11. It is a very stimulating performative evening in which young and old visitors participate in various cultural exhibits and performances along the river. This seemed like an opportune time to set-up an engagement activity capitalizing on the interest of people in the environs of the river walk.

Figure 6: At the three installation points, iPads were available for viewing the photo stream in real-time (left), with cards with text prompts to encourage interactions by way of the QR codes.

We found that our chosen physical installation sites were important in regards to peoples' awareness, attention and dwelling time. Sites with enough physical space to dwell naturally gathered the most people. Also, the translation of the Instagram photos onto physical, laminated cards exhibited on the installation seemed to require more descriptive text and a clearer prompting to act than the Instagram photos that were experienced digitally on the mobile phone. While people stopped and explored the IPADS and discovered how the streams mirrored the event and the place, it was not clear to them that they where invited to contribute. Interestingly, it seemed that the solicitations articulated in our Instagram entries did not work well in crossing contexts between digital and physical interactions. It seemed that translating the Instagram photo and hashtag texts into a physical form required another level of prompting – a physical invitation which set out verbatim instructions on what the user was to do in the interaction. Hence, the text on the physical laminated cards had to be designed with a clear and realistic idea of what kind of contribution people could make as relevant for their situated context of the walk. For example, ideally we would like people to contribute with contemporary documentation photos mirroring the historical photos -but realized that this required an engaged community of followers that would interact with the museums collection development and contribute independent of the physical event. Hence, it seemed that our physical design set up required a more clear idea of how users could relate to the museum images beyond liking and fol-

lowing in the way they engaged with imagery in the physical and place-based context of the river walk.

The 3000 people participating in the walk constantly uploaded photos of installations and situations experienced and hashtagged with #akerselva. This made it difficult to identify contributions from other walkers that responded to the prompts from the historical experiment during the event as opposed to those drawn by their own motivation to share their experience. By observing people interacting with the digital installations at the three different installation sites, we recognized that the prompts to engage digitally by commenting or answering questions also did not match the speed of images published on the stream. Staging a participatory design process that would engage people across digital spaces and physical places, is highly dependent on how such examples of experience, place and agency is related. These are properties of social media that seem to be of central concern for engagement across digital contexts and physical places.

5 Conclusion

Connecting design methods with peoples everyday, cultural and social practices is a big and complex endeavor that is deeply rooted in assumptions of the role designers bring into use, planning and management of their design processes. This is even a more deficient assumption within settings where the intention may be to develop relationships outside of well-defined places and contexts. In our case the design was challenged by shifting from the defined design space within a museum, out into the context of the distributed, public and mobile museum. This made apparent the need to involve theoretical perspectives and conceptual tools that would support our understanding of the everyday situations and practices that became our design space. It also became evident that the application of a participatory research approach to explore distributed museum communication would require new methods and techniques that mediate the located, situated and personal perspectives and interests of users in ways that prompt engagement.

While the application of anthropological perspectives into interaction design and participatory methods is rather well established, we have in this paper argued for having a cultural studies perspective on the semiotic tensions, conflicts and controversies that constitute the cultural dynamics of participatory processes. That this approach may be useful for design strategies that intend to engage located and situated groups of young people involving social media and imagery. Perspectives from cultural studies have helped us to move beyond over classification of social media interaction as entities nicely packaged in routines and conventions into understanding cultural practices as ongoing and ambivalent processes of negotiation. This has helped us to focus on the differences, contrasts, resistance, oppositions and tensions by which cultural practices engage in active sense-making.

The outcome of applying cultural studies concepts in participatory design in the Akerselva Digitalt case raises several issues that require more in-depth analysis than the ones explored here. First, understanding semiotic activities

as both mimicing and contrasting social shared practices, underlines the ambiguity by which cultural processes are characterized. To engage people in participatory design by connecting to their cultural practices, design researchers need to be aware of this oxymoron within the multiplicity of cultural shaping of identity, shared values and belonging.

While cultural studies helped us realize that peoples sense-making using Instagram are constructed in encounters and transactions that was negotiated with semiotics and modalities in different ways. Meanwhile, cultural studies also provided us with an understanding of the assembling activities people engage in when they use social media related to physical, place-based activities. Multiple sources of information do represent different properties and modalities – but in combination, they do give people new capacities. These capacities are part of the ongoing cultural dynamic negotiations of located and situated perspectives for users, and important for designers to understand in set-ups of participatory processes.

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GROUPTHINK: ICT DESIGN WITH CULTURE IN MIND

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Keywords: *culture, ICT, cognitive, narrative, conflict*

Abstract: *The study took a novel experimental approach from the field of cognitive linguistics to quantitatively describe the impact of culture on the use of mobile information and communication technology (ICT) in the context of peace and conflict. Beginning with the hypothesis that ICT reflects a mono-cultural perspective for collecting and organizing information, this study tested how a failure to adapt at a cognitive level resulted in distorted narratives. This has implications for democratic participation and data aggregation initiatives for policy-makers. Findings also present avenues for software development and security. This paper presents key findings from a larger study.*

1 Introduction

The dramatic increase in mobile and internet technology across the developing world (mobiThinking, 2012) has made leveraging information and communication technology (ICT) a primary focus of conflict management policy-makers. There is a seductive notion that solutions to conflict, corruption, and governance are bound up with the transformative power of technology. There has been a parallel emphasis on the potential of local knowledge. Based on experience as an intercultural mediator, conflict-affected populations are using new technologies, but in ways not envisioned by the ICT developers. An acknowledgement that, as one study participant expressed, "the Europeans are the ones who brought all this; it was not ours," has led to two main strategies in adapting to ICT; either users become confused, frustrated, and disenfranchised by the technology because it does not function in the way they intend (see examples from Haiti and Somali), or they actively manipulate it as the earpiece of the West (see examples from Egypt and Tunisia). (Sutherlin, 2013) This study takes the approach that the ICT tools available are being used in a limited manner by many populations because the tools do not meet their needs. While relying on sophisticated information gathering systems which do not involve ICT, these cultures remain in the position of being data donors until they control ICT design which reflects their needs.

Previous research has tried to capture the lack of engagement with qualitative scales. (Hill, Loch, Straub, & El-Sheshai, 1998; Hasan & Ditsa, 1999; Ditsa, 2005) This study took the novel approach of applying methodology from cognitive linguistics to shed light on the unexplored role of culture as a variable with quantitative results. Comparing how individuals conceptualized and recalled an event in their first language, with text from a mobile device application in their first language, and a third English version shows how, at the cognitive level, they naturally organize and communicate that information. The comparison indicates whether the ICT version more closely resembles the

English or first language oral version. Findings may ultimately point the way towards the next generation of ICT adapted around a new variable. This study empirically demonstrates that narratives conveyed over ICT are not the same as those given orally, and these differences cannot be dismissed as what we can expect between writing and speaking; there are substantial conceptual changes to narratives. Implications include the diminished reliability of participatory governance or policy making strategies executed primarily through ICT. The data collected cannot be trusted to be the information intended by the sources. Decisions made from aggregated data are similarly suspect.

Why do cultural communication preferences[1] matter for ICT? These technologies are the source for collecting human rights abuse reports, election monitoring, gathering health statistics, performing government needs assessments and much more. This study asserts that when amalgamated data from a referendum or poll is used for policy analysis or as evidence for solution implementation, the perceived participatory nature of the technology obscures the quality of the narrative it can provide. I argue that the available ICTs have not been sufficiently adapted for culture. They distort the narratives they capture and give a dramatically different picture of events than individuals give in oral accounts. The results of the experiment support the hypothesis that narratives given via ICT are frequently distorted. This has profound implications for democratic participation, conflict management, economic development for software, and data security. Furthermore, findings from this study call into question the validity of research carried out with purely ICT methods in similar contexts particularly as these distortions multiply with data aggregation.

2 Background

Previous research on ICT users has concentrated on language (Al-Eroud, Al-Ramahi, Al-Kabi, Alsmadi, & Al-Shawakfa, 2011) or communication (Olúbòdé-Sàwe, 2010; Taiwo, 2010) more generally, but often arrived at the conclusion that there was still another factor influencing how fully a group took up and engaged with new technologies (Graham, 2013). Still others like Hill et al. (1998), Hasan & Ditsa, (1999), and Ditsa (2005) attempted to look at culture head-on with qualitative dimensional measures similar to Hofstede (1980). While these substantiated the claim that there is a difference in the way cultures interact with technology, they did not answer the question of 'how.' This experiment does not attempt to define culture, but rather to demonstrate that designing ICTs without consideration of cultural communication preferences has an impact on the success[2] of the ICTs as tools for communication and information management and, more importantly, implications for policy-makers and conflict management. It is an initial step in a process of design innovation and a new avenue for research.

1. Cultural communication preference is the author's term which incorporates the levels of language (such as diction and grammar), narrative (oral or written as well as phrase sequence), and also context (such as appropriateness). These preferences are all culturally distinguishable features of a group.

2. Success is defined as conveying the information that an individual intends, just as other tools are judged to be successful if they perform their intended tasks.

Linguistic research has shown that human beings do not have a universal strategy for language. There are languages without verb tenses, nouns, or numbers. Some have a non-linear sense of time, categories of words that most European languages have no concept for including smell and sound (Evans & Levinson, 2009), not to mention differences connected to orality. (Ong 1982) However, information and communication technology (ICT) has evolved from a single corner of the North American and Western European language family. (Evans & Levinson, 2009) It reflects one culture's communication preferences and logic presuming, in effect, a universal mode of communication. (Hofmann, 1985) The linguistic research underpinning claims about mechanisms of human communication is based on only a handful of languages, mostly closely related European languages. (Evans & Levinson, 2009) With wider technology use around the globe, it is essential to consider these linguistic and cultural variables. The regions of the world considered to be experiencing a mobile technology boom (itu4u, 2013) coincide with regions of incredible linguistic diversity where the languages are not well studied. It is fair to say that our knowledge base is insufficient to truly know how certain characteristics of these languages interact with the medium of ICT. This study endeavors to fill this gap with the strategic use of Acholi, a Nilotic language which is linguistically distant[3] to English. This preliminary stage research describes how the cultural communication preferences of ICT users affect their interaction with software applications and digital interfaces. Exploring the issue with methods from cognitive linguistics makes this substantively different from looking at how translation affects use. The focus of this study looks at the thought process before language which is a new approach.

One reason these technologies have remained culturally monolithic despite increasing global diversity among their users is that they are largely adapted from crisis management technology which has a specific set of users and a specific task—international crisis responders and crisis management. These responders tend to come from organizations such as the International Red Cross and UNICEF and the technology was designed to meet their communication and information management needs in the context of a crisis. After slight adaptations, such as the interface language, these same technologies are re-tasked in conflict settings to support government transparency, election monitoring, human rights abuse reporting, health statistic gathering, and other domestic policy oriented tasks. ICT4Peace's statement of purpose exemplifies this trend to lump crisis and conflict, aid responders and local affected populations into one architecture. Their stated aim is to:

> *…enhance the performance of the international community in crisis management through the application of Information Communications Technology (ICT) -- technologies that can facilitate effective and sustained communication between peoples, communities and stakeholders involved in crisis management, humanitarian aid and peacebuilding.* (ICT4Peace 'What we do,' 2012).

3. Linguistic distance (Lieberson, 1964) is analogous to relatedness between species in biology as linguistics makes every effort to methodically quantify and differentiate between languages. Languages are also grouped into families which can be visualized on a tree of relatedness.

This same idea of seamlessly flowing from one task and set of users to another as though their shared geography warranted no distinction for ICT design was echoed by The Harvard Humanitarian Initiative (2010), in their report for UN OCHA *Disaster 2.0* (The *United Nations* Office for the Coordination of Humanitarian Affairs). For the initial use of the technology, the users were outsiders brought in because perhaps a country was devastated by a flood and could not organize recovery operations internally. For the new use of the technology, the users are indigenous (meaning local or domestic) as are the policy implications for the information; however, the technology has not been adequately adapted to reflect how the new users organize and communicate information at a conceptual level. With a practical aim, this study examined these ICTs (modelled on current field technology) so that software engineers could begin to incorporate a new cultural dimension for narrative.

3 Methodology

The issues that arise from this shift in users and task would be termed an *emergent bias* based on Friedman and Nissenbaum's (1997) fundamental guidelines describing the capacity of computer system design to discriminate against certain groups of individuals. Using the framework of cognitive linguistics, which combines insights and experimental design from both cognitive psychology and linguistics, the effects of an emergent bias in the current ICT design are revealed in a quantitative manner so deficiencies can be addressed. This type of inquiry relies on theories concerning *conceptual transfer* (Jarvis & Pavlenko, 2007) which Jarvis (2011) describes as a process by which concepts such as our experience of time, our interaction with objects spatially, our conceptualization of movement in relation to space and time, and even our place as observers of this experience, are coded in language and memory. These are all essential elements in recalling an event such as giving a witness statement for election monitors; the aggregation of these details is becoming the substance from which policies are made and key actions are taken.

The engineers Odejobi and Adegbola (2010, p.7) of the African Languages Technology Initiative in Nigeria argue that in an African context, technology must, "describe and represent the knowledge systems underlying African systems of communication….by critically and analytically address[ing] the question of how African people represent concepts." They propose that:

> *The development of a computer-mediated-communication technology must therefore be based on a systematic, retrospective and reflective review of African language. Such systematic study should look in to the past, i.e. in to the people's culture, with the aim of identifying the burial sites of knowledge so that they could be exhumed to develop technologies that will not only be useful technologically, but will help to reinforce and support the people's culture through their use in CMC based discourse.* (p.7-9)

Their work hints at a point of departure, and methods not tried such as engaging in the West African game *Ayo* to learn its regional cultural strategies and 'logic' in the way Chess and Sudoku are used in the West.

In order to refine the focus of the experiment to culturally distinct conceptual frames, I spent three months in Uganda in an intensive language-learning environment. Based on experiences as a cultural mediator in other linguistic environments that shared a profound distance to English, narrative distortion via ICT was a previously observed pattern. What remained was to identify the particular elements of Acholi that were least likely to be captured within the English-based conceptualizations of current ICT applications. Categorization including naming of schemas, persons, and locations was identified as culturally distinct (Ogutu, 2001, Malo, 2003). Each of these relies on the broader framework of tonality and reverberative semantic structures.

Naming and categorizing are associated with a small percentage of cultures. (Those cultures just happen to dominate the internet.) The logic of categorization we are familiar with in English was strongly influenced by writing or the evolution of the culture to become chirographic. (Ong, 1982) Among the nearly 6800 languages (Lewis, 2009), only around 100 developed a literature, so most remain oral to some extent. (Ong, 1982) Orality in a culture does not imply underdevelopment or opposition to literacy. Due to globalized media, most individuals in oral cultures have a hybridized communication style switching as needed; however, they still exhibit a preference. The 'decision' to exhibit many components of a cultural communication style takes place on a cognitive level so we are often not aware of it. (The cognitive level refers to thinking, remembering, inferring, categorizing, reasoning, and using language.) To return to the idea of categorization, predominantly oral cultures contextualize more than categorize. Categories are not used in the scientific, dichotomous manner (such as deciduous tree vs. evergreen or 'private' distinct from 'public'), but might be episodic (such as 'things that happen when the locusts arrive'), emotional (things that forebode), or are linked to a place or person as in a genealogy. In terms of interface design, consider how often websites and applications rely on categories for organizational structure. Categories as a conceptual framework for organizing information are therefore one of the points explored in this study.

Another cultural contrast highlighted by ICT is the conceptualization of personal identity. In western culture, the emphasis is placed on the individual while in other cultures, for example in Acholi culture where this study was conducted, the concept of the group is more foundational. Consider how the religious scholar John Mbiti (1990) explained the African viewpoint in terms borrowed from Descartes, "I am because we are, we are therefore I am." (p.104) Indeed, there was no word for *group* in Acholi until it was borrowed from English. Gathering, yes, such as a formal occasion like a wedding. But *group*, no. The word is used often in western, Anglophone culture: My contribution in the Group project. Women's Group. Book Group. He left the Group to become a Solo artist. Groupthink. This kind of language calls attention to the group phenomenon, the crowd. But for a communal culture, the group is the norm. The west focuses on the individual, while many other cultures are considered collectivist or communal. (Mawere, 2011; Al-hinai, 2012) ICT implications range from the absurdity of individual logins to issues related to gathering details about the perpetrators of actions in conflict, a focus of the results in this study. Giving individuals an identity distinct from the context of a group or

as a purely categorical, checking-the-box in a mobile ICT application way has the potential to strip away the essential markers of identity imposing arbitrary categories instead.

Tonality and the reverberative semantic structure of the narrative go hand in hand. Information is gathered, collected, and moved. But only what can be carried in sound and echo. It moves through repetition. It is stored in memory and in retelling, over and over in the sound retelling makes. It does not have the permanence of writing, the ownership of authorship. It forms by accumulation, being born from many sources; it is fluid, varied from omissions and additions. Recursive. This aspect of oral communication is the most at odds with the current ICTs used in conflict management settings. The African Languages Technology Initiative in Nigeria is focused on speech-to-text (and the reverse) technologies for tonal African languages, but has not begun to address the conceptual aspects of information organization associated with this complexity of cultural communication. This study examines these broad narrative structures in descriptive terms supported with evidence from quantitative frame analysis.

3.1 Sample

A non-representative sample of 29 participants (13 female, 16 male) was collected using quota sampling. The quota size was determined by a review of similar bilingual studies (see von Stutterheim & Nuse, 2003; Pavelenko, 2003; Brown & Gullberg, 2010). Participants were Acholi-English bilinguals who passed a modified oral English exam similar to the IETL or TOFEL. Additionally, they had not spent more than six months in a predominately English-speaking culture (acculturation bias). They ranged in age from 19 to over 40 years of age. All participants were approached through their employer because their employment had a social/political engagement component that made it likely they would use the type of technology under investigation now or in the near future, in other words, the target market for design change. This decision minimizes the argument of a technology gap because most participants performed data/information gathering with technology as part of their jobs. An effort was made to sample an equal number of male and female participants as well as a range of education levels (from water carrier to economist). Neither the sex nor the education level of participants was a focus of analysis, however consideration of 'mediating variables' (Javis & Pavlenko, 2007: 52) ensured the focus of the experiment remained on one independent variable, culture.

The language and location were chosen specifically because the characteristics of Acholi (alternately called Luo) such as tonality and narrative structure strongly contrasts with English (Lieberson, 1964). In addition, Uganda is at the nexus of several conflict zones where Acholi is also spoken including South Sudan and eastern Democratic Republic of Congo. Findings have immediate relevancy to the field of peace, conflict and security.

3.2 Method

A bilingual experiment was performed in Gulu, Uganda in May and June of 2013. Participants watched a short YouTube video simulating a violent event they might report as a witness to election violence, human rights abuse, or attack (the video was mild and more chaotic than violent). Because what precipitated the events in the video was unknown and the language was unfamiliar (from Nigeria), participants would be forced to draw on schema to aid in interpretation and recall. A schema is, "a structured expectation about people, situations, and events." (Sims & Lorenzi, 1992) A cognitive shortcut that helps us sort through sensory information that has been developed from experience and learned through culture. This is one of the ways in which the experiment pulls in culture at a cognitive level. Participants were asked to retell what they saw in the video first in Acholi, then in written question form in Acholi on a mobile phone application (in one of two tracks which represented an SMS-function phone and then a smart phone), and finally a third time in English orally. The mobile application was designed specifically for this study using the open source software Kobo Collect to mimic other software used by humanitarian aid and conflict management actors such as Ushahidi, All4Africa, and Gov2U. The hypothesis does not differentiate between the two tracks in stage 2 because, at the cognitive level, they both represent their Western origins. I argue that both the open and closed form question tracks on the mobile device limit the narrative and trigger a connection with English language at a cognitive level; composing a narrative via ICT is a pre-determined, pre-packaged process constructed by the medium, the ICT application. (Key findings did not indicate substantial differences between the two tracks related to the hypothesis; therefor, specific analysis comparing the two tracks is not part of this paper.)

In the ICT stage of the experiment, the SMS track consisted of one open question, 'Ngo ma otime?//*What happened*?' while the smart phone track asked 13 questions (both closed and open) about the scenario in the video in which the participant swiped a touch screen to advance. (only Acholi appeared on the device)

- Ineno_____? mony, kwo, laro lok // *You saw____? Fight, theft, argument*
- Ingeyo nining?// *How do you know?*
- Dano adi ma obedo iye? 2, 3-4, pol kato 4 // *How many people were there?*
- Nga ma obedo lamony dano? // *Which person was the attacker?*
- Cwinyi tek i kom lagam eni? Cwinya tek adida, cwinya tek, cwinya pe tek tutwal// *Do you feel sure about this answer? I feel very sure, I feel sure, I do not feel sure at all*
- Ngat mo owane? Eyo/ku// *Did anyone get hurt? Yes/no*
- Jami pa ngat mo bale? Eyo/ku? // *Did anything belonging to anyone get broken?*
- Jami pa ngat mo ki kwalo? // *Did anything belonging to anyone get stolen?*

- Gin man otime ki kwene? i yoo, i cuk, i town, pe angeyo // *These things happened where? In the street, in a market, in town, unknown*
- Otime i cawa adi? i odiko, i idyecing, i otyeno // *At what time? Morning, afternoon, evening*
- Locaden obedo tye, I videyo? (Bik wel dano 0-100) // *Were there witnesses, in the video? (estimate the number of people 0-100)*
- Ngat mo obedo ki jami lweny? Eyo/ku // *Did anyone have a weapon?*
- Abili obino i lok man? Eyo/ku // *Did the police come?*

Audio recordings were transcribed and translated for analysis by the researcher and reviewed for accuracy by a native speaker in-country. Questions 2, 5 and 9 offer an opportunity to express doubt. The order of the questions follows Acholi narrative structures to the extent possible, for instance, beginning with the general scenario followed by the general assessment of people involved. (This order is understood from language immersion, discussions with literature and communication professors in country, and an analysis of Acholi text.) Every avenue was utilized within the capabilities of the software to approximate the Acholi narrative pattern and fulfil other narrative elements as described in the methodology section in order to offer the best chance for the ICT to succeed. In this way, the limitations of the software to accommodate Acholi narrative are highlighted in the results. While modelled on previous experiments, the application of methodology from cognitive linguistics to describe bilingual communication with ICT is novel.

3.3 Analysis

The experiment, modified from Pavlenko (2003) and Brown & Gullberg (2011) consisted of gathering oral and written narratives in two languages in order to compare event frames with both statistical and content analysis tools. ICT used in conflict settings primarily collects narratives. Whether individuals are communicating political identity or collecting information about corruption, human rights abuses, or election monitoring, the data comes in the form of narratives. (Pavelenko, 2007; Slocum-Bradley, 2008; Castells, 1997) Narrative frames (alternatively investigated as *event construal* by von Stutterheim & Nuse (2003) and *interpretive frame*s Pavlenko (2003)) are short phrases conceptualizing a scene (in English it is often *who, what, where, why, how*). They become the anchors from which we recall an event and form the units of analysis here in the method of narrative frame analysis. Von Stutterheim and Nuse (2003) argued that the pattern of narrative, of conveying how an event was conceptualized through langauge is purely a matter of grammar because variation by 'culture' cannot be subjected to empirical study and does not bring us closer to understanding the conceptual level of language production. This experiment directly addresses the lack of empirical evidence regarding culture. Furthermore, language (grammar) is part of culture, so their finding is not incompatible with what I and others (Mbiti, 1990; Holtzman, 2004; Heron, 1966) assert, that narrative is culturally ingrained; therefore, by observing narrative patterns the influence of culture as a variable can be infered. Along with

the use of schema, the culturally rooted cognitive device mentioned in the methods section, the experimental model engages culture as an independent variable from more than one angle.

Narrative frames were compared across three versions recalling the same event. Frames which emphasized broader narrative structure as well as conceptual elements were marked for their presence or absence within the narratives: general scene category (for example, did the participant describe the scene as a fight in one narrative version but as a theft via ICT narrative); rhetorical qualifiers (introducing doubt using words such as *like* or *maybe* or the conditional tense) for example did the participant hesitate and seem uncertain in one narrative but point the finger accusingly in the next; conceptualization of the primary actors in the scene (such as victim vs. perpetrator or client vs. service provider) for example did one narrative frame the event as a fight between men on the street and the next narrative describe a taxi driver and customers with the players in the scene shading how we understand the event; the conceptualization of location (often inferred from objects or actions); and secondary action details. If two narratives matched across the first three frames, thought to be the most significant for event conceptualization, (other frames, such as location were not consistently produced across enough participants), then these two narratives were considered to share substantively the same concept of the event, the same information. Participants were slotted into five outcomes based on which narrative stages matched. Qualitative observations did not play a substantive part in the analysis, but provide some additional context along with literature review to interpret the quantitative results.

3.4 Reliability of Coding

Following methodology of Pavlenko (2003) and Brown & Gullberg (2011), the results of this study were recoded independently by two researchers of native or near native language fluency (one researcher spoke a closely related Nilotic language from Ethiopia and did not need to rely on an English translation). Both reached very similar results and the initial coding is therefore taken to have both validity and reliability. Discussion and specific statistics are based on the coding of the author.

4 Results

This paper presents highlights of a larger study. These are the key findings related to the hypothesis, how ICT distorts narratives, with emphasis on the most promising aspects for further study. The experiment clearly demonstrated that, as predicted, the Acholi narrative was not conveyed by the ICT application; both groups of results (those that did have matching oral Acholi and ICT narratives and those that did not) are considered to support the hypothesis because the rate among the outcomes which matched was so low. A non-parametric test, the Wilcoxon signed-rank test (used to assess patterns such as 'matching'), strongly supports the rejection of the null hypothesis (that the narratives would match) with a z value of 53. 6 and $p < .01$. Out of the 27

participants' narratives, 7 were coded as 'matching' and 20 as 'non-matching.' (29 individuals participated, but 3 were discarded due to researcher error and 1 participant contributed an SMS version and a smart phone trial= 27 total.)

Through narrative frame analysis, which considered the three elements of the event (general scenario, main actors, and rhetorical qualifiers), nearly three-quarters of the narratives did not convey the same information in the ICT as in the first oral Acholi stage. Since the ICT application's interface was in Acholi, and the ordering of the stages favored the two stages matching, there is high degree of confidence that an independent variable disrupted that narrative via ICT. In other words, the participants were unable to express the same information, the same event concept, with an Acholi language ICT application. Furthermore, there was a very low rate of success among those that did convey the same narrative. This is consistent with the hypothesis that ICT is most often disruptive to languages distant to English because the rate of matching is most similar to a chance outcome. This finding also raises some interesting questions about the overall validity of ICT narratives in similar contexts.

The distorted narrative that the hypothesis predicted could take one of three forms at the frame level (or a combination of these). First, the participant might have conceptualized the scene as a fight in the oral Acholi version and then, in the ICT stage, changed to describe the scene as a theft as occurred with Participant 1:

Stage 1: Atye ka neno dano lacoo ka goyo moni lawote. Lweny. Aneno ka tye ka lweny ento atye ka nen calo gutimo.// *I am seeing people a guy hitting a guy. A fight. I see there is fighting but I am seeing maybe they have happened.*

Stage 2b:

- Ineno_____? mony, kwo, laro lok // *You saw____? Fight, theft, argument* Kwo// *theft*
- Ingeyo nining?// *How do you know?*
  Pyen. Gnat ma tinsel ka goyoneni pe. pe dwogo adong ne
  [P1 tied to text answer but autocorrect for English changed answer and we moved on because of time. Intended Answer transcribed from audio] Pyen ngat ma ki bedo ka goyo ne ni pe dwoko adong.// *Because the person who being beaten does not return the blows.*

Interestingly, in question 9 which asks if anything was stolen, the response was, *no*. This kind of inconsistency was not uncommon in the ICT stage. The switch out of oral communication mode is hypothesized to be detrimental to semantic content and conceptual recall.

The response for questions 2 (see above) and 4 (Nga ma obedo lamony dano? *Which person was the attacker?*) formed the basis for the second frame regarding the conceptualization of the main actors. Many participants ascribe culpability and also mention the role of the crowd emphasizing an expectation that they be active not passive. If narratives did not match in the 'main actors' frame, it could be that the participant began describing a taxi driver and client, a relationship which structures the scene in a certain way, but then changed to describe the action as occurring between a thief and a crowd or perhaps discarded a descriptive relationship between the actors entirely. This frame changes how the scenario would be understood by someone collecting a report

because it is the backbone of the concept or schema around which we fill in other details. It creates the picture of the incident and allows both the participant recalling the scene and the individual reading the report to infer details connected to the concept of, for example, an incident between a taxi driver and a customer. The experiment highlighted two problems related to this frame at the conceptual level. First, as mentioned above, the concept of culpability is so culturally rooted, that when asked, 'who was the attacker?' many responded with information picking out the individual I would categorize as the victim. For them, they are answering the question as Participant 19 did:

- Ineno_____? mony, kwo, laro lok// *You saw____? Fight, theft, argument* kwo
- Ingeyo nining? //*How do you know?*
  Aneno dano tye ka goyo ne.// *I see people are hitting him*
- Nga ma obedo lamony dano? *Which person was the attacker?*
  Dano ma lakwo.//*The person who is the thief*

Participant 19 used a cultural schema to recognize theft associating the guilt of the crime with how the man did not defend himself against attack. The answer to Question 4 conceptually substitutes attacker with problem-causer (a term used by participant 5). Participant 19 was not the only individual to invoke this conceptualization of culpability, however it reverses the roles imagined in the question. The man in the video chasing and beating another man was not the man identified by the participant. If report was aggregated and acted on by the police, who would be arrested? How do the culturally constructed concepts of justice, cause and effect, and culpability organize information and shape our technology?

Finally, doubt or uncertainty was coded when a version included two or more instances of rhetorical qualification with such words as *like* or *maybe*, offering alternatives, or the use of the conditional tense. If doubt was expressed in the oral version but disappears in the ICT narrative stage, then the story changes. For Participant 10, there are four instances where uncertainty is introduced in the oral version but only one for the ICT-SMS version.

Stage 1: Aneno dano mo pa angeyo nen calo (um) lweny mo oere i lok kom cul. Ngat acel nen calo pe oculu taxi ci conductor oero lweny i kome. Onyo conductor po odwoko po odwoko cente pa ngat mo ma nongo oweko ngati okeco gi ero lweny //*I saw some people I don't know maybe some fight started about payment. One person maybe did not pay for the taxi then the taxi driver started fighting with him. Or the taxi driver didn't give back didn't give back the money (change) for someone when he was making him get annoyed they start a fight.*

Stage 2a :Conductor chaka lweny icom customer I lok kom. Cul. Unyo conductor okwero culo balance palawot ci okelo tele ikingi.// *Conductor started the fight with the customer there. Payment. Or conductor should pay the balance brought between them*

Suddenly, instead of describing how there was *like* someone *maybe* fighting someone *or* having a dispute over taxi fare, now the narrative becomes more certain declaring one specific person attacked another person. It becomes actionable information. Tone matters. With any of these changes between the oral and ICT narratives, imagine how they could falsely influence

the actions of the police during an election, or once aggregated, could distort the perception of policy-makers about a situation. It could be argued that in writing, we edit ourselves and delete repetitions of *like, maybe* and other equivocations. However, 'doubt' was coded as only two instances of qualification and could also be achieved with grammatical choices such as Participant 4 used in stage 2b Question 4: Nga ma obedo lamony dano?// *Which person was the attacker?* Audio: I don't know who is that one, but it seemed like the customer to the bus; or Participant 25 stage 3: ". . .that is the imagination I'm trying, the interpretation I'm trying to pick out. . ." It is a way of framing the event in memory and can be conveyed in many ways. Any change in this framing of doubt is regarded as further support of narrative disruption for two reasons: in practice, a report given with certainty or with doubt yields different results (yes, this man is the attacker vs. I'm not sure who is the attacker), and secondly, the means by which doubt is conveyed in Acholi cannot be separated from broader narrative elements. It is packaged within tone and the reverberative quality of the narrative structure.

In the smart phone track, Questions 2, 5 and 9 provided an opportunity for participants to express uncertainty. Specifically, Question 2, an open format question asked, 'Ingeyo nining?// *How do you know?'* and Question 5, 'Cwinyi tek i kom lamgam eni? Cwinya tek adida, cwinya tek, cwinya pe tek tutwal// *Do you feel sure about this answer?//I feel very sure, I feel sure, I don't feel sure at all*' (This is a follow-up to Question 4 'Nga ma obedo lamony dano? *Which person was the attacker?')* that asked participants to rate their certainty. Also Question 9, ('Gin man otime ki kwene? // *These things happened where?')* offers several poor choices which did not suit the situation as well as the option 'pe angeyo// *I don't know*.' Most participants did not utilize these survey-style options in the manner anticipated. There was a disconnect with the topic even in questions which directly addressed uncertainty such as Question 5. Participants' responses did not reflect the same level of uncertainty that they expressed in their oral narratives particularly with respect to the identity of the attacker. It is hypothesized that (un)certainty, in particular, is inextricably linked to tonality and the reverberative narrative structure. Conforming their narratives to the ICT application meant dismantling these essential elements for reconstructing event details.

Table 1 represents the final designation of all of the participants' outcomes. Frame analysis resulted in each narrative being given an absolute code as 'matching' or 'not-matching' based on all three frames of comparison matching between narratives. For example, Outcomes 1-3 represents participants whose oral Acholi narrative did not match their ICT version (stage 1≠2). Outcome 1 represents the eight participants whose ICT narratives did match their English version (stage 2=3). As described in the analysis section, a 'match' was coded when the general scene frame, main actors, and rhetorical qualifiers were consistent between narrative versions. Judged from a pragmatic perspective, did the narrative convey the same event concept? As the table shows, nearly two-thirds of the participants did not produce the same narrative in oral Acholi as they did via ICT.

Table 1. Final Outcome Frequencies

Oral Acholi version NOT conveyed in ICT stage (1≠2)			Oral Acholi conveyed in ICT stage (1=2)	
Outcome 1 ICT Acholi = oral English	Outcome 2 Oral versions equivalent	Outcome 3 none equivalent	Outcome 4 all equivalent	Option 5 Oral Acholi= ICT Acholi
1 ≠ 2 and 2 = 3	1 ≠ 2 and 1 = 3	1 ≠ 2 ≠ 3	1= 2= 3	1 = 2 but ≠ 3
8	8	4	4	3
Total: 20			7	

The order of the stages undoubtedly played a role in the outcomes. There is evidence of priming across languages and stages; however, the presence of any priming effect between stage 1 and 2 (i.e., repeating in written Acholi what had just been said out loud), would tend to make the stages more similar and thus disprove the hypothesis. Since the results show this was overwhelmingly not the case, it can be said that the factors influencing the outcomes were very strong indeed. Any priming between stages 2 and 3 would only affect secondary placement of the participant into one of the outcome categories but not affect the hypothesis.

It might also be argued that researcher influence played a role in outcomes, participants aiming to answer in a manner they believe will please the researcher. However, results indicate such a wide variation among answers and the survey did not seek any particular correct answer (for example, question 9 specifically had all poor choices concerning location) because participants were not being evaluated on what they said as much as how they said it. This is the benefit of an experiment based in cognitive linguistics. Similar to psychology experiments that measure response time or eye movement, the participants are often unaware or unable to control the object of investigation so while researcher influence is certainly real, it is negligible in the experimental results.

Future experiments might include an initial phase wherein the participants design the ICT survey questions. Comparison of two or more language groups would connect the results to more literature in bilingual memory and cognitive linguistics.

5 Discussion

This experiment was an initial effort at describing a major barrier to democratic participation-- disenfranchisement from the currency of the 21st century, information-- due to the architecture of ICT software at the cognitive level. From a pragmatic perspective, the experiment sought to highlight whether or not the Acholi narrative was conveyed by ICT methods, a concrete first step to demonstrate that there is a problem and where design changes could start. This preliminary study collected intra-subjective data from a limited sample of Acholi speakers and yielded robust results; it has far reaching implications and should continue to be investigated in other languages. Through narrative frame analysis, nearly three-quarters of participants' outcomes fulfilled the hypothesis that the oral Acholi stage and ICT stage did not match. Results

strongly indicate that ICT disrupts the conveyance of event conceptualization in languages distant to English. Other key factors which surfaced through content analysis were conceptualization of culpability and the semantic role of structural narrative elements for marking doubt and uncertainty. These all merit further study both within and outside of ICT engagement.

The main findings of this research are quite promising. Results strongly indicate that narratives conveyed over Acholi-language ICT are not the same as those given orally in Acholi. This goes beyond simply saying that written and spoken communication are different. It affirms that the logic of organization within the ICT application is rooted in another culture, a culture whose event conceptualization strategies such at categorization are at odds with Acholi event conceptualization. Furthermore, there remain cognitive strategies for memory and event conceptualization that are linked to orality, to the tonal qualities of the language and the reverberative listener-speaker relationship. Diluting those aspects into textboxes and dichotomous tick marks strips essential semantic information away. It could mean that Acholi and other tonal languages should only pursue a voice-activated ICT. Implications include the diminished reliability of participatory governance or policy-making strategies executed primarily through ICT. The data collected cannot be trusted to be the information intended by the sources. Decisions made from aggregated data are thereby suspect. Some groups are unable to rely on ICT strategies for important tasks such as political identity building or government transparency and this could be why such initiatives are slow to take root or gain momentum in similar contexts.

This study also bridged a new methodological field for exploring user engagement with ICT. It went beyond the surface of translating interface languages or shuffling text-based pages and images for information organization alternatives (Luna, Peracchio, & de Juan, 2002) to demonstrate that the dominant text-centric solution of broadening participation was wholly insufficient. By using event conceptualization frames as the unit of analysis, the results highlight narrative elements that are disrupted at the level of thought or concept (pre-language) so that software engineers can begin to consider how to redesign with new variables. Organizing information around non-western logics would be a dramatic paradigm shift with implications for democratic participation, economic development, and information security. If the technology can be simplified into stepwise, logical, linear, reproducible elements . . . 'enter your location in this box,' 'select category of human rights abuse you would like to report' and the user is given only three buttons to choose from . . . then perhaps the larger problems where the technology is being deployed such as war, famine, illiteracy can also be chipped away at and fractured and dissolved with the ease of information management. This design approach is preventing us from considering new variables and restricting us to a path of streamlining and distilling of what already exists.

The underlying logic of how information is organized, our assumptions about what information to communicate, these elements have received less attention in the race to innovate. Instead we have proceeded with the first culture's preferences as our model. I see enormous potential to re-imagine the visual interface and the structures connecting information management to re-

spond to cognitive cues and communication norms from the cultures crowding into the digital space. . . Nigeria, Indonesia, Brazil, China. . . . On the other hand, there is considerable political and economic pressure to maintain the status quo. (Sutherlin, 2012)

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RE-POLITICISING PARTICIPATORY DESIGN: WHAT CAN WE LEARN FROM *FAIRPHONE*

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Keywords: *elimination design; ensoulment, recoding, redirective design, sustainment*

Abstract: *This exploratory paper is a contribution to the discussion of the re-politisation of Participatory Design. After a brief introduction of this Scandinavian design tradition, the Fairphone, a sustainable and fair mobile phone, is introduced as a case to rethink design as politics. Concern for planetary destruction, as a result of climate change, motivates the discussion of Tony Fry's notion of redirective design in the analysis of the Fairphone. Is the Fairphone just 'less bad' or is it paradigmatic example of an alternative technological vision? There are many lessons to be learned from Fairphone, not just by Participatory Design. Most importantly, Fairphone shows the importance of relating the things we help design to futures that become possible or impossible. Participatory Design, with its focus on democratic practices and 'having a say', needs to find ways to bring the voices of future generations into today's design practices.*

1 Introduction

"Design is politics by other means" – Randi Markussen, 1996

Science, technology, and design have all been described as doing the work of politics (Fry, 2009, 2011; Latour, 1987; Markussen, 1996; Winner, 1980). Participatory Design is one of the design methodologies that has taken the understanding of *design is politics* quite literally. Participatory Design, as a methodology for participatory technology design, has its roots in Scandinavia in the 1970s. It began in Oslo with a cooperation between the Norwegian Iron and Metal Workers trade union and the Norwegian Computing Centre (1970 - 1973) (Ehn & Kyng, 1987). The union's goal was to implement educational activities in the local union clubs in order to create knowledge that would support the workers' interests when contributing to the design of computer-based planning and control systems in the workplace. The project started as a rather traditional, top-down research project. In order to succeed, a new strategy was developed; the new focal points were the local unions, with the researchers playing a supportive role. Local knowledge on control, planning, and data processing informed a new textbook, produced by the researchers and local unions (Nygaard, 1974). Most importantly, the project resulted in one of the first data agreements, which regulates the development and introduction of computer systems. This agreement then informed national data agreements in Norway, Denmark, and Sweden.

Today's guiding principles of the Scandinavian Participatory Design tradition come forth out of the pioneering projects of the 1970s and 80s. Kensing and Greenbaum (2012) describe these as equalising power relations, democratic practices, situation-based actions, mutual learning, tools and techniques, and alternative visions about technology. Participatory Design has also broadened its reach and scope: it is engaged in public spheres and every day life (e.g. Björgvinsson, Ehn, & Hillgren, 2012) and is a globally known design methodology applied in many different areas, such as urban planning, architecture, and sustainable design.

Through the years, there has also been critical voices. Eevi Beck's (2002) critique focused on the de-politisation of the meaning of participation, which sometimes became outright exploitative and instrumental (Keinonen, 2010; Shapiro, 2010). Recently there has been more calls for a re-politisation of Participatory Design (Bergvall-Kåreborn & Ståhlbrost, 2008; Iversen, Halskov, & Leong, 2012; Steen, 2013). In this exploratory paper I will look into such a re-politisation based on Tony Fry's (2008) design perspective, Design Futuring, with a focus on his notion of *design as redirective practice*. In this paper I will present a recent example of a redirective design, the *Fairphone,* a mobile phone designed on principles of fairness and sustainability.

The Fairphone project started with a vision about the future, not with a commitment to a particular design approach. The project is located in the field of Design Thinking (Brown, 2009) and social innovation (Murray, Caulier-Grice, & Mulgan, 2010). Its design approach and methodology seems a mix of an Open Design perspective (van Abel, Evers, Klaassen, & Troxler, 2011) based on open design principles (Mister Jalopy, 2005), Design Futuring (Fry, 2009), and Participatory Design (Simonsen & Robertson, 2012). In the project, design is perceived as a process for radical change in the way we develop, produce, and consume goods. The Fairphone is a critical and maybe even paradigmatic case (Flyvbjerg, 2006): it is *strategically important* to the general problem of unsustainable design, production, and consumption, and, although it is still early to decide, it may have *prototypical value.* The Fairphone case can inform design research and practices in many different ways. This paper focuses on one particular question: What can the Fairphone case tell us about re-politicising Participatory Design.

2 Participation is Not Everything

> *"[Our] ability to sustain ourselves over time depends on an ethical turn towards an ethics materially embodied as the performative qualities of the things of the world we make."* – Tony Fry (2012)

Participatory Design started out as a design methodology based on the political and ethical stance that workers have the right to *have a say* in the design process of a technology that will affect their work life and skills (Bjerknes & Bratteteig, 1995; Bratteteig, Bødker, Dittrich, Mogensen, & Simonsen, 2012). After Participatory Design moved out of the workplace and into society in general, this ethical stance broadened into the recognition of "an accountabil-

ity of design to the worlds it creates and the lives of those who inhabit them" (Simonsen & Robertson, 2012, p. 5). In many of today's Participatory Design practices, this idea of world-making is mostly confined to local problem situations, without analysis of the larger political-economic context. The technology design no longer plays the role of *tool* (Ehn & Kyng, 1985) in collective struggles for empowerment and life improvement. We have all become IT consumers. This has also changed the conditions for Participatory Design projects. Participants, such as workers, nurses, patients or children, are more skilled and bring more informed needs and ideas into the design process. This supports and strengthens Participatory Design's guiding principles, such as democratic practices, situation-based action, and mutual learning, and results in many interesting and productive participatory design projects. As a result, the focus of design researchers is more on fine-tuning participatory practices, method development, and on what kind of use becomes possible, then on the larger political context in which the designed solution is developed, produced, and used.

The fact that this context moves to the background, or becomes invisible all together, is also the effect of the democratic practices employed during the design process. Moral values are often not *front-loaded (Hoven, 2007)*, but need to emerge during the design process in order to be taken into consideration in the design (Halloran, Hornecker, Stringer, Harris, & Fitzpatrick, 2009; Iversen et al., 2012). Moral values such as fairness and sustainability may therefore play no role in the design specifications, even if these values are generally considered important to the participants.

2.1 The Common Good

In the introduction to *Design as Politics*, Tony Fry makes a rather stark statement: "Democracy (in its difference) has de-legitimized the voice of the 'common good' and abandoned the development of conditions able to create a social ethos" (2012, p.8). Fry argues that in the "developed 'democratic world', [democracy] has generated into televisualized 'consumer democracy'" (ibid.). Participatory Design, because of its guiding principles, could be a counter force to *consumer democracy*, but it doesn't have specific guiding principles that will guarantee the strengthening of the voice of the *common good*.

Participatory design researchers Guro Bjerknes and Tone Bratteteig (1995) pointed to this in their discussion of the evolution of participatory design projects from the 1970s to the early 1990s. They correlated where a project started, in the organisation (or society) as a whole or in special interest groups, with the project's strategy for change: does a project use existing institutions (e.g. legislation or trade unions) or is the focus on acting in the local situation (emphasising participants' knowledge and skill) (ibid., p. 82-6). They observed a shift in focus in Participatory Design in the 1980s, from a more political design project to an ethical design approach. This had also consequences for the role of the design researcher, who started out as an emancipator in a collective political process, but became a facilitator of his/her own individual ethical responsibility, which might or might not be supportive of a larger political programme.

Even if Participatory Design could strengthen its emancipatory role in collective political processes, its influence could be limited. Fry argues that democratic design "depends to a large degree on socio-political orders in which democracy has currency" (2009, p. 10). This may especially be true for the Scandinavian Participatory Design tradition. Already in the early years, the portability of Participatory Design to the US context was questioned (Greenbaum, 1993). Ten years later, Eevi Beck asked if Participatory Design was outdated in Scandinavia (2002). She referred to Bjerknes and Bratteteig's (1995) concern that Participatory design lost its broad view and to Stolterman's (1995) critique that Participatory Design has become too focused on improving the practices of designers. Beck calls for a more politicised agenda:

> *A politicised agenda a for PD would need to centrally address, then, the legitimacy of anyone not only to propose solutions, but to suggest what the problems are. What are the agendas for research, and who gets to influence them? They connect to the deep question of what politics is considered to be* (p. 83).

Beck proposes a renewed focus on power - on patterns of dominance, because participation in itself is not enough: the political project called Participatory Design needs to "counter the reproduction of marginalisation by information technology" (ibid., p. 89).

The political agenda for design, as suggested by Beck and Fry, entails more than a *front-loading* of moral and social values in the design process. How we think about design, and consequently about the role of the designer and the designed, has to change. In the context of the ongoing planetary destruction as a result of climate change, several ways to rethink design have been proposed, such as metadesign (Wood, 2007), sustainable interaction design (Blevis, 2007), and Design Futuring (Fry, 2009).

2.2 Design as Redirective Practice

The understanding of design as creating worlds, not things-in-itself (Björgvinsson, Ehn, & Hillgren, 2012; Fry, 2009; Simonsen & Robertson, 2012), refers to a more relational understanding of design. The design practice can be understood as a process of becoming (van der Velden, 2009) – the meaning and matter of design, designer, and the designed emerge in the encounter with each other. In the design process, people and things don't interact – they don't meet each other as entities given in advance that come together in an exchange. The characteristics, properties, and meanings of design, designer, and designed emerge in their *intra-actions* with each other and other people and things (Barad, 2003; Suchman, 2007).

The result of a particular design practice is an emergent, not final, iteration of the design. Such a design is not determinate, nor is everything possible. As the design becomes part of new networks or ecologies, new intra-actions take place, and new iterations of the design emerge. Intra-actions open up new possibilities, "as others that might have been possible are now excluded: possibilities are reconfigured and reconfiguring" (Barad, 2007, pp. 234–235). This

understanding of design brings out the accountability of the designer in each iteration of the design. "This is not a ' cause and effect' kind of responsibility, but a responsibility for the material entanglements we help to enact" (van der Velden & Mörtberg, 2012, p. 679).

This relational understanding of design positions the designer as an ethical subject. The question thus becomes: how to intervene in the ongoing design practices that produce unfair and unsustainable designs? Besides the design perspectives mentioned above, there have also been calls to *undesign design* (Brigham & Introna, 2007; Pierce, 2012; van der Velden, 2010) and to *redirect design* (Fry, 2009). Fry argues that we need to redirect our design practices towar ds *sustainment,* to that what keeps us in existence. This requires the relational understanding of design as outlined above, because it helps us to to understand that in each iteration of a design, we both create and destroy (ibid.). Conventional *green* or *sustainable* design projects may result in more environmental design, but "'less bad' is no good" (McDonough & Braungart, 2002, pp. 45–67). We need to understand who or what destroys – this includes ourselves as designers and users – and that what is destroyed, in order to work towards change through redirective design practices.

Fry discusses two key redirective design strategies, e*limination design* and r*ecoding*. Elimination design is based on identifying unsustainable products and the redirective practices that will change them or that will eliminate them completely. Fry presents six possible strategies to promote our thinking about *elimination design* (p. 76-80):

- **Erasure of 'need' by exposing it as a fabricated want**: Many of our needs are in fact created wants. A new normative model, based on the pleasure and virtue of a living a simple and moderate life is the only way to continue.
- **Functional substitution**: the replacement of high impact technology by low impact alternative.
- **Product multipurposing**: Design can materially transform single function technologies.
- **De-materialization and re-materialization**: De-materialisation is design that elimin- ates the use of certain materials, while re-materialisation is the substitution of human labour for machines in a smart way.
- **Symbolic devaluation and the destruction of sign value**: Sign value (brands) of products (and perceptions, values, behaviours, and attitudes) can be purposely under- mined (see also Recoding)
- **Prohibition**: The use of laws and regulations to ban the existence and use of unsus- tainable products, practices, and services.

Recoding is about de-signing, re-signing or the transformation of the sign value of things (objects, images, structures, spaces, services, and organisations) (Fry, 2009, p. 81-89). Through recoding, things get a different meaning or loose their existing meaning. An example of elimination design and recoding are Adbusters' Blackspot shoes. For

example, the *Blackspot Sneaker* (Figure 1) is a functional substitution and re-materialisation of *Nike's Converse* as it offers a low-impact and worker-friendly alternative to what were considered "sweatshop-produced sneakers" (Wikipedia, 2014b) (Figure 2). The *Blackspot* itself, a hand- drawn anti-logo, is a recoding of the S*woosh*, the Nike logo (Adbusters, 2014) (Figure 3).

Figure 1: Blackspot Sneaker *Figure 2: Rematerialisation* *Figure 3: Recoding*

3 Fairphone: "A seriously cool smartphone that puts social values first"

The mobile phone is one of the most prolific digital technologies and the design of mobile applications is the fastest growing digital design sector (mobiThinking, n.d.). The largest app-stores, Apple App Store and Google Play, have each close to a million apps available for download. In 2013, an estimated 100 billion apps were downloaded, forming a huge incentive to designing more apps and more powerful mobile technology. In 2013, the average lifetime of a mobile phone was 18 months in the USA and 29 months in the UK (Tran, 2013).

The focus on applications and content has taken the attention away from the negative effects of mobile phone's production, use, and disposal. Some who do focus on these effects have formulated different solutions, such as refraining from designing mobile phones (Pierce, 2012) and sustainable interaction design of mobile phones (Huang & Truong, 2008). In this section I will explore the result of a redirective design of the mobile phone: the *Fairphone*.

The Fairphone started as a project of the *Waag Society* (www.waag.org) in Amsterdam, The Netherlands, and is since 2013 a social enterprise based in Amsterdam. The initial goal of the project was to produce a *fair* mobile phone; fair towards people working in the mines in DR Kongo that produce the minerals for the phone, i.e., non-conflict minerals, and fair towards the factory workers producing the mobile phone. The Fairphone project emerged out of a constellation of activities that responded to the human rights and workers rights abuses in the mineral mines in DR Kongo and Indonesia and the East-Asian electronics industry, and illegal and unsustainable e-waste handling in Africa. For example, the documentary *Blood in the Mobile*, by Danish director Frank Paulsen, was released in 2010, relating the story of how the minerals mined for our mobile phones fuelled the ongoing civil war in Eastern DR Kongo. The film documents forced labour, child labour, armed conflict, corruption, and more. The year 2010 also saw massive labour unrest in China (Wikipedia,

2014a). Especially the worker suicides at the Foxconn electronics factory, 18 attempts left 14 workers dead, received wide-scale media attention (Guo, Hsu, Holton, & Jeong, 2012; Ngai & Chan, 2012). In 2008, the Dutch organisation *Time to Turn* (www.timetoturn.nl) launched a campaign for *fair* mobile phones. In 2009, the European coalition *makeITfair* (www.makeitfair.org), based in Amsterdam, published a report called *Fair Phones in the Netherlands: It is Your Call - How Dutch and European mobile network operators can improve responsibility for their supply chain (makeITfair, 2009)*, which focused on the whole supply chain, from mining minerals to disposal. It concluded that there were no fair mobile phones on the market. In March 2010, the Fairphone project was launched by a coalition of non-profit organisations and two national telecommunication providers in the Netherlands, with Waag Society as project coordination and implementation site.

3.1 Fairphone Stories

> *Our Story. It's big, small and about you.*
> *You can change the way products are made, starting with a single Phone.*
> *Together, we're opening up the Supply Chain, and redefining the Economy – one step at a time.* – Fairphone website

In the Fairphone project, the idea of what is a fair mobile phone soon expanded to include the whole life cycle, including end-of-life, of the mobile phone. Fair includes a people-first approach, fair and conflict-free resources, the use of recycled materials, e-waste solutions across the supply chain, fair technical and design specifications, and transparent pricing (for details see the Fairphone website). There are different ways to tell the story of the Fairphone. The following text, taken from the Fairphone website (2014), focuses on the role of the Fairphone as a tool to further collective political action and global changes:

> *Our smartphone is a practical starting point for telling the story of how our economy functions. Producing a phone lets us tackle the big questions and challenges we face from a human perspective. It's an everyday object that nearly everyone owns, uses or can identify with. It's both a tangible device and a great symbol of our connected, social world.*
>
> *But the phone is not a solution in and of itself – it's simply a vehicle for change. We're revealing its story, understanding how it's made and producing an alternative. By buying this phone, you're reconfirming that collective action counts and becoming part of a community that has the power to fuel change."*

Strong visions guide the Fairphone design, taking the Fairphone project beyond the design of a mobile phone and towards a new economic model, the *circular economy*, in which finite resources are captured and reused and plant-based materials can biodegrade into compost (Preston, 2012). The Fairphone website presents a roadmap to a fairer economy, which consists of five components (Fairphone, 2014): Made with care, Smart design, Clear deals, Lasting

value, and Precious materials[1] (see Figure 4). The Fairphone isn't 100% fair yet (van Abel, 2013), but the project's central value of transparency enables full insight in the supply chain as well as full pricing transparency (Wernink, 2013) (Figure 5). For example, the Fairphone website provides a photoblog from the production site in China (Mu, 2013), information about how they selected their production partner (Ansett, 2013a; Ballester, 2013), and information on the wages and working conditions of the factory workers in China (Ansett, 2013b).

Figure 4: Roadmap to a fairer economy

Figure 5: Cost breakdown of first Fairphone

A second way to tell the story is from a design perspective. The Fairphone design process is entangled with all other aspects of the development of the mobile phone. As 80% of a product's environmental impact is determined at the concept and design phase (Action and Research Centre, 2013), the whole process took place concurrently, and intra-actively, with four design objectives for a circular product economy: designing for longevity, designing for service, designing for re-use in manufacture, and designing for material recovery (Chitenden, 2013). The design process brought together a large, diverse, and multidisciplinary group of participants, consisting of activist and non-profit organisations, factory workers, factory owners, miners, programmers, interaction designers, legal experts, graphic designers, material experts, investors, telecom operators, and more. At a later stage they were joined by 25.000 fair technology supporters who paid in advance in order to bring the first edition of the Fairphone into production. The design process also included trips to DR Kongo (minerals), China (production), Ghana (e-waste); and a bootcamp organised in Amsterdam from May 30 – June 1, 2013, in which an international group of participants took up three design challenges for a fair phone (for results, see Waag Society & Fairphone, 2013):

1. Unlike many other mobile phone producers who wanted to get rid of conflict minerals, and who moved their business to other countries, Fairphone decided to buy the minerals from DR Congo: "Fairphone's decision to work in Congo, on the other hand, comes from the vision to source from areas that need our continued economic support. Fairphone wants to work in these areas where we can work to improve and contribute to the situation – we want to change rather than avoid these issues in conflict areas" (Ballester, 2013).

1. *DIY (Do-It-Yourself) fair phone*: What is the role of end-users if they can locally produce their own phone? And what does this mean for the design?
2. *A fair phone that lasts*: How can you make mobiles phones more sustainable in use, re-use and recycling?
3. *A fair phone that feels fair*: How can you let the user experience that a phone is open and fair? What does this mobile phone look like? How do people interact with it and what do they experience?

Another way to tell the Fairphone story is from a specification perspective, the set of technical requirements that inform the design of the first Fairphone. After all, the Fairphone isn't only "a vehicle for change", it is also aiming to be a "seriously cool smartphone": it has to fulfil the expectations of a smartphone. The design of the mobile phone itself (hardware) was an already existing design. This may be the reason the Fairphone looks like any other smartphone, but there are some significant differences:

- the body of the phone is made out of post-consumer *recycled polycarbonate,* retrieved from old devices;
- it contains *non-con ict* minerals
- the phone comes *without a headset or charger*, because most people already have those;
- it has *dual SIM*, so people don't need two phones in order to separate their work communication from private communication;
- the free/open source operating system gives *root access*;
- it has a *removable* battery;
- it can be *opened up and is repairable* (spare parts and repair manual are available); and lastly
- it is shipped in *minimal and sustainable packaging*.

3.2 The Fairphone as a redirective mobile phone design

> *One of the problems with the 'greener gadgets' version of sustainable design is that the result is mostly still more stuff – hopefully less harmful stuff, but rarely just less stuff. Is it possible to use the practice of designing to eliminate stuff?* (Tonkinwise, 2012)

Tony Fry's (2009) *Design Futuring* is about creating a future through design. When design is understood as world-making, thus incorporating in its frame of reference the social, cultural, economical, political, and environmental, it can be at the *frontline of transformative action*. How transformative is the Fairphone? Is it a redirective mobile phone design or just *less bad*? In this section I will look at the Fairphone using Fry's key redirective practices: *elimination design* and *recoding*.

Elimination design is about replacing an unsustainable design by a sustainable design (e.g. replacing a gasoline-guzzling lawnmower by a hand-mower), or, more radically, by changing the unsustainable context (e.g. replacing the lawn by vegetable garden and natural growth and use the hand-mower when needed) (Fry, 2009, p. 74). The Fairphone is taking the more radical option. It replaces the unfair and unsustainable mobile phone with a fair phone; it changes the unfair and unsustainable context in which the mobile phone is produced and works towards changing the unsustainable economic model that sustains unfair and unsustainable practices. In this comparison, the only difference is the carbon foot print of *use;* using the hand-mower significantly changes the carbon footprint of use, the Fairphone seems to have no effect on the carbon footprint of mobile phone use (Berners-Lee, 2010).

The transformative design of the Fairphone becomes more clear in the context of the more detailed approaches found within elimination design (see Table 1)[2]:

Table 1: Fairphone and Elimination Design (based on Fry, 2009)

Design for elimination	**Fairphone**
Erasure of *need* and *want*	Dual SIM function will diminish the need for two phones. Creation of new values, such as fair, transparency, and ensoulment (Blevis & Stolterman, 2007), erases the *want* to replace a working mobile phone with the latest new model.
Functional substitution	Substitution of the unfair mobile phone with a fair phone.
Product multi-purposing	The Fairphone comes always unlocked, one doesn't require to buy a new phone when switching telecom provider.
De-materialisation and Re-materialisation	*Dematerialisation*: No conflict minerals; no headset and charger; reduced package materials. *Rematerialization*: Conflict-free minerals; use of recycled, replaceble, and reparable materials.
Symbolic devaluation	No – but *symbolic revaluation* through ensoulment (see Section 3.3)
Prohibition	Fairphone is working closely with other organisations in regulating the use of conflict minerals in electronics. It support a possible European Law on responsible sourcing in conflict areas (Gerritsen, 2013).
Recoding	**Fairphone**
Transformation of the sign value	The mobile phone as a performance of longevity, re-use, recyclability, and sustainment and as vehicle for a new economic system (circular economy). The buyer of Faiphone gets more than a mobile phone, s/he become an investor in a more sustainable future.

The Fairphone, even if it's not yet 100% fair, is part of a redirective action towards changing the ways we design and produce technology. In this process,

2. For description of approaches, see Section 2.2.

in the intra-active becoming of the Fairphone, the design process transforms and becomes a collective political platform towards a new economic system. The designed, the Fairphone, has come to represent the opposite of what is common for mobile phones in the post-industrial economies: its is fully open, fully owned by the buyer, and it is designed for longevity and repairability. The role of the designer also transforms, from being an ethical subject as facilitator, implementing a personal political programme (or not), to an ethical subject as emancipator in a collective political process. This became also visible during the Fairphone Bootcamp for the fair phone of the future, in which the designer-participants developed their own list with guidelines (see Figure 6) and a Fairware roadmap, which maps the road from the Fairphone to a circular economy (Mier, 2013).

Also the future users of the designed, the Fairphone user, transform and are transformed in this intra-active process. The future user becomes part of the design process: first by participating in the crowd-sourcing process that made the production of the first 25.000 Fairphones possible and later by participating in design workshops, bootcamp, Fairphone design discussion forums, and commenting on Fairphone's blog posts. The user as owner becomes also an activist investor in activities towards a more sustainable economic system through financial contributions (see Figure 5) to a worker welfare fund and e-waste solutions.

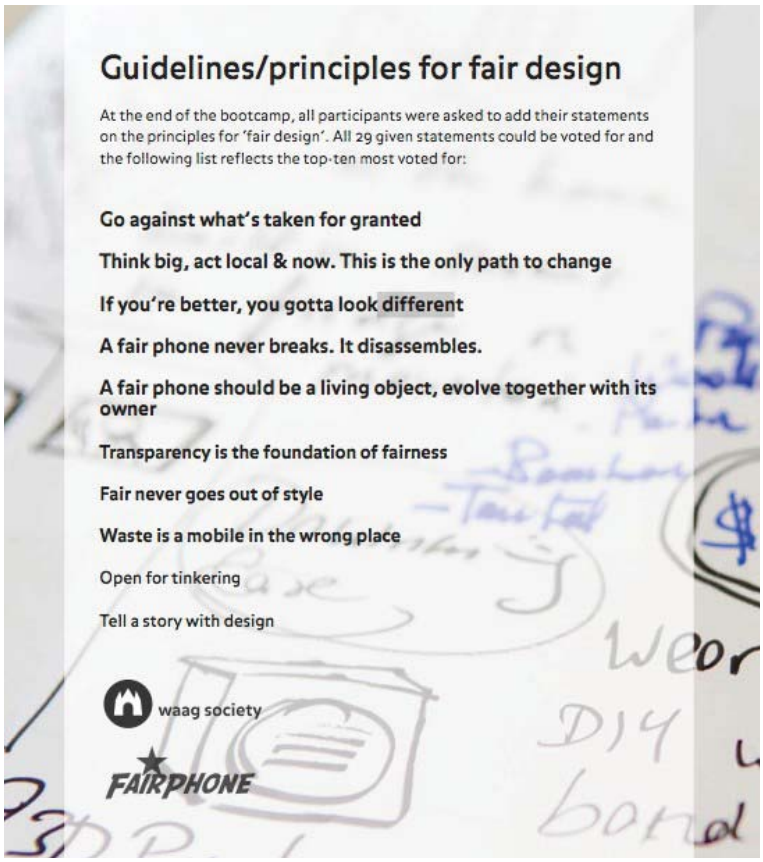

Figure 6: Guidelines for a fair design

3.3 Ensoulment

One of the *Guidelines/principles for fair design* (Figure 6) is: "A fair phone should be a living object, evolve together with its owner". This can be understood as a reference to what Nelson and Stolterman (2003) call *ensoulment:* "Ensouled things imply well-cared for things, looked-after things, durable and enduring things" (Blevis & Stolterman, 2007). Odom et al. (2009) find that a thing's function and symbolism, material qualities as well as relational qualities, such as engagement, histories, augmentation, and perceived durability, are the main design factors that give it ensoulment.

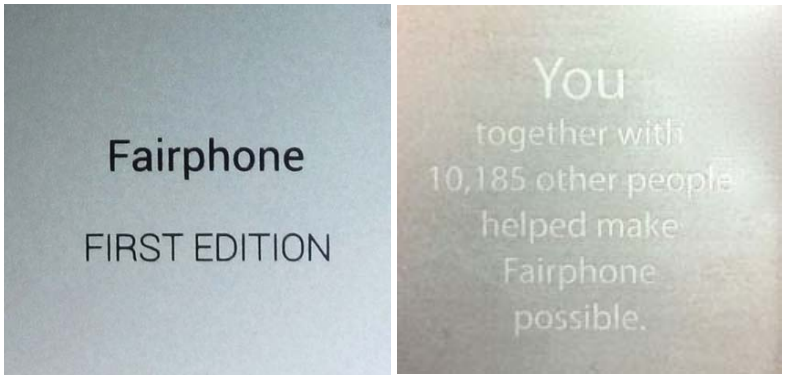

Figure 7: Ensoulment through augmentation

The Fairphone case shows that *ensoulment* can also be understood as part of a redirective practice. Especially the *material qualities* of the Fairphone (e.g., non-conflict minerals, recycled plastic, technical specifications) and *augmentation*, through inscriptions on the back (picture on the left) and inside the Fairphone (picture on the right) (see Figure 7), further the ensoulment of the Fairphone. Through ensoulment, the Fairphone is symbolically revaluated, which may promotes its longevity.

4 Re-politicising Participatory Design

The story of Fairphone is reminiscent of Participatory Design projects of the 1970s and 80s. Fairphone implements Participatory Design's guiding principles within the larger collective frame of *design futuring* (Fry, 2009). The Fairphone project is about designing an alternative vision of technology, of working towards a fair and sustainable future in today's unsustainable economic system. Not only do workers, designers, and users participate in the project, also future generations have a voice through this concern for the future.

In a Participatory Design context, we could say that Fairphone has taken the global economic system as its *local problem situation* (Bratteteig et al., 2012) and uses both existing institutions, such as workers organisations, non-governmental organisations, and regulation, a diverse body of participants (interest groups, communities), as well as a mobile phone to reach it goals. In this process, the Fairphone itself is both a *tool* for change as well as an end in itself.

What can we learn from Fairphone in the context of re-politicising Participatory Design? First of all, Fairphone shows how the ideology of the early

Scandinavian Participatory Design tradition of the 1970s and 80s, with its political and institutional/systemic perspective and collective approach, is still relevant in the 21st century, even if many of the conditions have changed. Most early Participatory Design projects included unions and/or workers as partners in the project and they designed alternative technology visions as a response to the proposed technological solutions proposed by the management or owners of the workplace. Fairphone has a broader partnership, including individual activist users as well as representatives of large telecoms as participants in the design process (e.g. the Fairphone Bootcamp). Participation and partnership has broadened, not in a liberal democracy manner "de- legitimising the voice of the 'common good'" (Fry, 2009), but as a result of a vision of the common good, now and in the future, which transforms the role of design, designer, and designed.

Secondly, front-loading values. In order to take a multi-generational perspective in design - acknowledging that future generations will be affected by our design decisions – Fairphone showed that certain values needed to be front-loaded in the design process. Participatory Design, with its focus on participation and democracy, is called an ethical design methodology (Robertson & Wagner, 2012). Finding ways to bring the voices of futures users into the design process is an important ethical challenge for Participatory Design. Front-loading values may also help focus the design process on needs, not wants.

Thirdly, design as redirective practice. The Fairphone project shows how elimination design and recoding can play an exploratory and strategic role in a design process. They bring the larger socio- and political-economic context in the design process and so elicit different values for design as well as mobilise a large community of participants. In a Participatory Design context, elimination design and recoding strategies can be used as interventions in 'design as usual' or they can function as practical guides for designing for longevity. Also symbolic revaluation, in the form of ensoulment, can result in designs with a longer lifetime.

Fourthly, transparency. In the Participatory Design literature, transparency hardly plays a role. It is sometimes mentioned as a desirable value of a design process (e.g. Binder & Brandt, 2008), but a discussion of its possible enabling and transformative role, as seen in the Fairphone project, is missing. Fairphone uses all social media, plus a website, mailing list, and discussion forums, to inform, to make visible, to learn, to design, and to build a community. As Fairphone shows, transparency is crucial on several levels: supply chain (materials and suppliers), financial, working life, and production planning. There are no hidden agendas or silent partners, no industry secrets or copyrighted designs. By making transparency central to our Participatory Design projects, we strengthen our democratic practices, while the political issues at stake, in terms of our choice and use of materials (software, hardware), sustainability issues, ownership, empowerment, openness, become visible and material.

Lastly, crowd-sourcing. The result of Participatory Design projects are often prototypes that never become products because of lack of investment or funding (Culén, 2014). Crowd- sourcing can become a funding source for the participatory design and production of alternative technology visions.

5 Concluding Remarks

The re-politisation of Participatory Design, with its focus on democratic practices and 'having a say', is about finding ways to bring the voices of future generations into today's design practices. Even if we start out small, in a local problem situation, focusing on a particular interest group, we have to zoom out to include its socio-economical and environmental context in our frame of references. This will expose the networks and ecologies in which our design activities take place, which will enable participatory designers and other participants to understand the interconnectedness of the local problem situation. Secondly, we have to *front-load* certain values, such as open design, transparency, recyclability, longevity, and repairability in our projects, if we want the resulting designs to be fair and sustainable.

The Fairphone is an informative case for the re-politisation of Participatory Design, but it also shows how such political projects become quickly very complex and vulnerable. The Fairphone project grew into an ecology consisting of designers and project managers with a vision of a new economic model (the circular economy); communities, organisations and institutions working towards sustainable resourcing and a fair work life; new thinking about design; a functioning fair phone; and not the least 25.000 Fairphone owners. This gives the project strength, as it has a real impact as an alternative vision of design and technology. Now that the first edition of the Fairphone is shipped to its new owners, it will become part of new networks and ecologies. They will in their turn create new possibilities, which will reconfigure the Fairphone ecology – for good or for bad.

Finally, Donna Haraway wrote: "I will critically analyze, or 'deconstruct' only that which I love and only that in which I am deeply implicated" (Haraway, 1997, p. 151). Here is my disclosure: I am deeply implicated in *my* Fairphone. Our life together has just begun.

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ENROLLING MOBILES AT KOWANYAMA: UPPING THE ANT IN A REMOTE ABORIGINAL COMMUNITY

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Keywords*: mobile phone adoption, mobile broadband, Aboriginal people, Actor Network Theory, remote community*

Abstract: *Actor Network Theory is used in this paper as an approach to analyzing and interpreting mobile technology adoption in a very remote Aboriginal community in Cape York, Australia. Following the actors and insisting on the principles of generalized symmetry and impartiality towards all actors, the narrative centres on an event in the Wet season when the mobile network 'fell over' and all communication by mobile phone and mobile broadband ceased for a time. This extreme weather event acted as a catalyst for residents, business people and service providers to talk about mobile technology in their community and how it impacts on their lives. By setting aside arbitrary distinctions between groups of people in this community, the researchers rejected simplistic notions of cultural difference, and, instead, recognized place and cultural pratices associated with place as determinants of mobile phone behaviour.*

1 Introduction

Indigenous Australians living in remote areas have been rapid adopters of mobile technology. In contrast to the continuing low levels of home ownership of fixed-line phones and computers, as well as low levels of home Internet access, 3G (third-generation, Internet-enabled) mobile phones have increasingly become the standard device for Indigenous communications and Internet access (Joint Select Committee on Cyber-Safety for Indigenous Australians, 2013). A 2007 study of mobile phone use in Central Australia and studies across three remote communities in the first year of the installation of 3G mobile networks in Cape York in 2008 showed much higher levels of personal adoption of mobile technologies than for any previous information and communications technology (ICT) (Brady, Dyson and Asela, 2008; Brady and Dyson, 2009; Dyson and Brady, 2009; Tangentyere Council and Central Land Council, 2007). There is no evidence that the adoption of mobile phones is abating, and this is confirmed by remote-area studies undertaken since (Auld, Snyder and Henderson, 2012; Kral, 2010), in addition to an urban study conducted in Melbourne (Edmonds et al., 2012).

Some attempt has been made to explain this ready acceptance of mobile technology, particularly mobile phones. Generally, there is an acknowledgement that there is a cultural fit between Indigenous culture and mobile technology as opposed to other Information and Communication Technology (ICT). For example, the exclusive sale of prepaid mobile phone services in remote communities has allowed Indigenous people on low incomes to manage the usage costs of their phones, despite cultural expectations of resource

sharing (Brady and Dyson, 2009; RTIRC, 2008). The affordance of mobile phones for photography, video and sound recording/playing has promoted a shift from institutional control over content to the active initiation of multimedia authoring by Indigenous people (Kral, 2010) and Indigenous choice of content for viewing (Auld, Snyder and Henderson, 2012). Mobile phones have been interpreted as resources which reflect the place they are located, the cultural context and the social practices of the community that use them (Auld, Snyder and Henderson, 2012). For example, mobile phones have been shown to fit with Indigenous cultural strengths in orality and further the use of local language through both calling and texting (Brady, Dyson and Asela, 2008).

In order to explore these issues further, the authors of this paper decided to follow a different approach since not one explanation appeared to offer a complete answer, probably because the situation is a complex one. Firstly, we looked at a *whole* community, including the use of mobile technology by both the Indigenous people and the mainly non-Indigenous business people and service providers who supply the community with products and government or other services. The technology that was studied included both mobile phone use and mobile broadband, a technology that has not previously been studied in Indigenous communities in Australia. Secondly, we adopted Actor Network Theory (ANT) as a way of offering a clear and unbiased view, unobstructed by preconceptions of what Indigenous culture might or might not be. In this respect, Underwood (2008) notes the similarity between ANT and grounded theory: 'the important thing is to follow where the situation leads us, across boundaries, across ontological categories and across levels, rather than try to fit the data to some pre-conceived framework.' However, ANT parts company with grounded theory in that it seeks to understand a particular situation rather than to build a general theory. It is often seen as a theory of last resort and so seems appropriate for studying a situation 'on the edge', distant from the great urban centres where mobile and other technologies are so often taken for granted.

The situation that is the subject of this study occurred in Kowanyama, an Aboriginal community located in the delta area of the Mitchell River in the vast savannah lands of western Cape York in the Far North of Australia. The case study will focus on a particular event, the breakdown of the mobile network in the middle of the Wet season when nine days of torrential rain (1.5 metres in total) fell on Kowanyama in the wake of Tropical Cyclone Fletcher. Coinciding with the weather event was a government call for submissions by communities, such as Kowanyama, to apply for funding for better mobile coverage. This meant that the researchers happened to be on the ground collecting community views for the submission at the time of the deluge. The weather event, and associated network breakdown, formed a focal point for residents of Kowanyama to talk about mobile technology in their community and thus worked as a catalyst for understanding at the time of the data collection for the submission. Through following this situation we hope to be able to derive some insights into the role culture plays, or does not play, in determining the adoption of mobile technology.

The paper begins with a brief outline of some of the key concepts of ANT, followed by a discussion of two papers that have applied ANT to the

issue of Indigenous adoption and use of ICT. The situation in Kowanyama is then interpreted in the narrative structure typical of ANT, and finally the role of culture and place is considered.

2 Actor Network Theory

ANT was developed in the 1980s as a way of interpreting scientific and technological events and moving beyond the limitations of sociological approaches current up to that time. It is usually concerned with explaining a particular, local situation and thus often adopts a case study method (Underwood, 2014).

One of ANT's key platforms is the rejection of any distinctions between the natural and social worlds, that is, between things and people. Such *a priori* categorizations would involve the imposition of a pre-established view which would inevitably colour the analysis and prevent the researcher from seeing the situation for what it is. ANT shares with social constructivism a sociotechnical view of technology, but eschews any idea of technologies as constructed, or of humans as constructors. Instead, the principle of generalized symmetry is invoked, whereby the human and material aspects of the problem are reported in the same terms, without bias or judgement (Callon, 1986). Both constitute actors in the story and both are seen as mediators 'that transmit effects on their own terms' rather than being 'passive links in causal chains' (Underwood, 2008, p. 1). Not only do technologies perform tasks that otherwise humans would have to do, but they also constrain human action because of the characteristics of their design and their capabilities (Latour, 1992).

Within a given situation, the actors assemble to form a network. This constitutes a 'loose, dynamic, always tentative collaboration' (Underwood, 2008. p. 1). It is a hybrid collective of human and non-human actors who are modified and evolve as a result of their associations with others in the network. All actors perform or enact the joint reality of their shared situation in the network. A catchcry of ANT is to 'follow the actors', as they evolve within the network 'through translation, through internalising scripts from other actors and through attempting to conscript others in turn' (Underwood, 2014). Translation is a term referring to the process by which actors 'become' through their interactions with other actors. Callon (1986) defines four 'moments' in the process of translation as: 1) Problematization, in which a situation is first defined; 2) *Intéressement*, in which the relationships between actors and their roles in the network start to be defined and other competing associations are cut; 3) Enrolment of actors, in which alliances are consolidated; and 4) Mobilization of allies to accept a given solution. Sometimes, in situations of failure, there is another moment: 5) Dissidence, whereby the network falls apart. An important concept in the process of translation is the 'obligatory passage point', without which enrolment of the actors in the network fails.

2.1 The Application of Actor Network Theory to Indigenous Adoption of ICT

There appear to be few examples of ANT in research of Indigenous informatics, despite the suitability of the approach to interdisciplinary fields. Two pa-

pers include one dealing with the enrolment of mobile phones and the Internet by the iTadian people living in a remote mountainous region of the Philippines (Orticio, 2011), and the other is a study of Internet banking by the Yolnu in the isolated Aboriginal town of Ramingining in Arnhem Land in Australia's Northern Territory (Nicholls, 2013). Both studies are typical of ANT in having a strong focus on the local, confined as they are to one place and one cultural group. However, both also connect to localities beyond the cultural heartland: in the case of the iTadian, to families working in the big cities and abroad; while in the case of the Yolnu, to bank officials located on the other side of the Australian continent.

Technology is an important actor in both these cases. For the iTadian people, the Internet and mobile phones allow communication with those absent, a 'portable extension of affective human relationships' (Orticio, 2011, p. 1). Even after death, the words of a departed spouse are stored as text messages on the phone, a permanent testament to love and intimacy. The technology thus enrols itself into existing networks of personal relationships. However, the technology does not work alone but as part of a complex hybrid and heterogeneous collective consisting of many actors, for example, the small shops in a neighbouring service town which supply Internet access for the majority who have no breadwinner living abroad to provide the cost of a computer and Internet connection at home; the mobile network which allows mobile phone communication and Internet access via mobile broadband; the system of support for poorer relatives who cannot afford the technology at all but must rely on relatives to relay messages; and the continuing dependence for communication on the network of buses and small stores acting as couriers and post offices to relay mail to other parts of the country.

Both articles follow the actors as they and their networks are translated over time. The process of translation of the technology is obvious in the iTadian study as long-distance communication channels shift from total dependence on the mails, to satellite-based Internet access at a local college, to home Internet access and mobile phones for the few, to finally a situation where an estimated nine out of ten adults and young people own mobile phones (Orticio, 2011). In the Australian study, the banks' translation of the concept of Yolnu identity into a number is more insidious, and their enrolment of the Yolnu people into this performance since the banks are obligatory passage points for managing money (Nicholls, 2013). The banks go further in translating Yolnu individuals into whole series of numbers needed to establish identity in order to open or access bank accounts, while on the other hand the Yolnu translate the bank's number-based security into ways they can manage, through writing it down on paper, sharing security codes with trusted family members, or through family impersonating them on the phone when speaking to bank officials.

The role of culture in these two case studies raises many questions. The importance of the kinship system for the iTadian led to the enrolment of mobile technology and the Internet to support continued communication when economic circumstance forced family members to travel afar in search of work (Orticio, 2011). However, infringements of cultural practices regarding respect for the sanctity of the dead by inappropriate posting of photographs of the de-

ceased on the Internet continued, despite protests from elders. For the Yolnu, the bank's security systems were translated into practices that fitted with Yolnu ways: 'The understandings … behind concepts such as personal ownership, material value, the power of secrecy, were all destabilized in these stories. … In Ramingining it is possible to pass passwords around, to be different people over the phone' (Nicholls, 2013, pp. 54-55).

3 Following the Actors at Kowanyama

This narrative of mobile adoption centres around the cyclonic weather event which happened at Kowanyama in February 2014, but also draws on threads from previous case studies which the authors have conducted in other remote townships in Cape York and the Torres Strait: Wujal Wujal, Lockhart River and the island of Dauan (Brady and Dyson, 2009; Brady and Dyson, 2010; Brady, Dyson and Asela, 2008; Dyson and Brady, 2009; Dyson and Brady, 2013). It is hoped that the latter will provide insights over time into the translation of the network of mobile technology and the Indigenous people who use it in a way that the one incident might not. In addition, one of the researchers was resident in Kowanyama at the time, and this facilitated a more longitudinal point of view.

The information which provides the basis for the narrative came from interviews and conversations with a cross-section of Aboriginal residents; the mainly non-Aboriginal managers of all six business operating in Kowanyama (food outlets and one accommodation centre); and Aboriginal and non-Aboriginal managers and staff of twelve of the main service providers in the town. Interviews were unstructured, with questions adapted to the role of the interviewee and the direction they wished to follow. Responses were handwritten at the time of interview and entered on a computer that day. Being a small community, it was possible to clarify any issues with the original interviewees if necessary at a later time. Permission to conduct the research was granted by the Mayor and Councillors of Kowanyama Aboriginal Shire Council. Interviewees were asked if they wished to participate and, if they refused, their wishes were respected.

3.1 Defining the Actors

The starting point for an ANT study will naturally begin, like any performance, with the selection of actors. In a set situation there are inevitably many to choose from. Kowanyama Aboriginal Shire is an obvious beginning point, given the close link between culture and place as well as the aim of this paper to arrive at some understanding of the influence of culture on mobile technology adoption in this remote community. The shire consists of the town of Kowanyama; the Homelands where traditional owners camp, fish and hunt in the Dry season; and the four designated camping and fishing spots (Topsy, Shelfo, Bull Crossing and Wonya Creek) frequented by locals as well as by recreational fishermen and women who visit the area in the Dry (June to October). With its unsealed, 4WD-only roads cut off for about six months of

the year by monsoonal flooding, no access to shipping, and only four scheduled flights in per week, it represents one of the most isolated communities in Australia. The nearest towns are the Aboriginal township of Pormpuraaw 120 km to the north, Normanton 361 km to the south, and Cairns 602 km to the south-east via Chillagoe. Kowanyama is one of the largest communities in Cape York, with an estimated population of 1,200 (KALNRMO, n.d.). Despite being well catered for by a number of service providers and shops, Kowanyama, like many remote Aboriginal communities, suffers from marked socio-economic disadvantage and high unemployment since there is no industry as such and few permanent jobs. Kowanyama has many attributes which impact on its role in this narrative, including isolation, the dead flatness of the town and shire, monsoonal weather patterns and the unique culture of its Aboriginal community.

In defining the human actors, Nicholls' (2013) advice to set aside distinctions such as black and white is a good one since ANT rejects all assumed dichotomies. Instead, the human actors are defined by their access to technology as evidenced during the research. Thus there are:

- Kowanyama residents who, apart from TV and radio, depend almost solely on their mobile phones for ICT. The residents include most of the Aboriginal community, but also comprise people from outside Kowanyama, such as the new, mainly non-Aboriginal 'schoolies' (school teachers), who were dependent on their mobile phones for communication at the time of the event;
- Small service providers with 'fly in, fly out' staff (or in the Dry, 'drive in, drive out' staff), who rely on mobile phones and laptops running off mobile broadband for their work, and sometimes satellite or radio phones to cover them on the road;
- Businesses and larger service providers with access to landlines, computers, mobile phones, and mobile broadband, in addition, sometimes to servers, ordering and reservation software, fax machines, satellite phones, CB (Citizen Band) radio phones, etc.

Another group that has been largely omitted are the contractors, who drive in from the large towns to undertake repair, maintenance, building or trades work in the Dry, but who could not be interviewed since this study was undertaken during the Wet. Presumably they also depend mainly on mobile phones while they are in Kowanyama, and some might have CB radio phones for communication on the road.

Opening the 'black box' of mobile technology releases three actors, all of which in different ways enrol, or are enrolled by, Kowanyama and the three human actors defined above:

- The mobile network consists of a repeater station in town (its aerials beaming out over Kowanyama from the town's highest structure, the not very high Water Tower), which connects to a mobile tower located 8 km from Kowanyama on a sand 'ridge' (not very high either, but it provides dry ground all year round), in turn linked to Australia and the world by a chain of microwave towers that stretch across Cape York.

This mobile network constitutes the obligatory passage point, without which no communication can be entered into via mobile phones and without which access to the Internet via mobile broadband is impossible. Thus, without the mobile network the actor-network under study would cease to be.

- Mobile phones have changed over the years, but those sold in Kowanyama consist universally of pre-paid phones. Pre-paid provides the primary cost-management strategy for people who have a low and irregular income, and who often choose to share their phones with other family members, who themselves may not be able to pay for usage (Brady and Dyson, 2009).
- Mobile broadband is a more recent actor, providing those with computers or laptops access to the Internet via a dongle or wireless modem.

Another actor in this narrative comprises the instruments of Government, particularly Federal and State telecommunications policy for remote Indigenous communities and the funding to enact it. The national telecommunications carrier Telstra, who rolls out and maintains these networks, can be considered part of this alliance. Telstra built the mobile phone infrastructure and flies in technicians from the large Cape York town of Weipa to service the mobile network when it fails and to perform regular maintenance.

In a small community where everybody knows everybody, one more actor to be considered is the local communication channel. This has two arms: the Post Office noticeboard and the rumour-mongering 'grapevine', which were enrolled to provide information to the community (and the researchers) about the weather event.

3.2 Moments of Translation: Enrolling the Actors in the Network

Having defined the actors, it is time to examine how they came to join a network. To do this Callon's (1986) moments of translation described earlier will be loosely employed as a tool, in particular, problematization, intéressement and enrolment.

Kowanyama has enjoyed land lines since 1989, and a CDMA (voice and text-message) mobile phone service from 2003 to the end of 2007 (Pearce 2003). The ongoing problematization of providing improved telecommunications to remote Indigenous communities (and the difficulty of doing this) can be seen clearly in several Federal Government reports (ACMA, 2008, p. 5):

> *Indigenous Australians living in remote communities face distinct challenges in accessing and using basic telecommunications services. Vast geographic distances, small and remote populations, the cost of deploying telecommunications infrastructure and harsh environmental conditions present difficulties for the provision of telecommunications services to these communities. These difficulties are compounded by the socioeconomic disadvantages faced by many individuals within remote Indigenous communities.*

After defining the problem, this report differs from its predecessors in trying to insert mobile services as a possible solution in lieu of the Government's schemes and subsidies for fixed-line phones and computers, that had failed in the past to interest Indigenous people (ACMA, 2008, p. 31):

> *Mobile network infrastructure may offer a means of multiple service provision in remote Indigenous communities. … [An] example is the provision of 3G network coverage by Telstra in regional and remote Australia, which presents the opportunity for some Indigenous communities to adopt mobile broadband services.*

In Callon's (1986) terminology, the report may be seen as a device of intéressement, trying to enlist the other actors in the mobile solution. The report was published in 2008, the same year that the old CDMA service was replaced and Telstra rolled out its 3G mobile network to all major communities throughout Cape York, commissioned to do so by the Queensland Government (Brady and Dyson, 2009). Thus both Federal and State governments have been allies in this process of trying to interest remote Indigenous communities in mobile technology.

The speed of enrolment of Kowanyama residents in mobile technology was impossible to gauge in our study since mobile phone use had become normalized to the extent that no-one could remember when the 3G network even went in. Evidence from other studies, however, shows that Indigenous people were at first slow to adopt: only a handful of technology leaders seemed to buy CDMA phones (Brady and Dyson, 2009). Most waited until the 3G service was in place, when enrolment was rapid: it was not only communication that interested Indigenous people: it was the combination of voice, SMS, Internet access and the many multimedia and entertainment features of 3G phones (Brady and Dyson, 2009; Dyson and Brady, 2009). Within a year of the implementation of the 3G service, more than half of the Indigenous people interviewed in two communities similar to Kowanyama owned a mobile phone (Dyson and Brady, 2013), while another study found that access to mobile phones was practically ubiquitous when both ownership and sharing of phones were taken into account (Auld, Snyder and Henderson, 2012).

The adoption of mobile phones by Kowanyama residents is currently extremely high. The Post Office reported that it sells 40-50 mobile phones per month, while the Kowanyama Store sells 3-4 phones per day. One manager described the dependence of Kowanyama residents on their mobiles in the absence of landlines phones and home computers, and stated that, 'They're vital. … Their only form of communication to the outside world is their mobile.' Some elderly and middle-aged people do not have phones, but may receive important messages via a relative who owns a mobile and acts as a contact point. Likewise, young children often do not own phones, but instead might be allowed to play with their parents' phone. When children reach high school age and attend boarding school, 85-95% of them have mobile phones as an essential means of keeping in contact with their parents and family while they are away from country.

A translation, or displacement, is visible over time in the style of mobile phones used by Kowanyama residents. The most common 3G phone in 2008 was a small-screen model (Brady and Dyson, 2009), while now only very few of these are sold in Kowanyama. Instead, 'flip' phones (once a luxury) have become the standard phone, and touchscreen phones (previously unheard of) are the most popular with young people. Both flip phones and the simplest touchscreen phones now sell for $79 (including $10 starter credit), compared to $110 for the small screen phones six years ago. No doubt the drop in price and the increased availability of, and demand for, fashionable and more usable models has contributed to the consolidation of the relationship between these two actors – Kowanyama residents and mobile phones.

In addition to helping parents support their children through the six years of boarding school, it is obvious that residents put their mobile phones to excellent use and many spoke passionately about the importance of mobile phones in their lives. When residents marry into other communities or move away for work, or outsiders move to Kowanyama for work, phones help maintain contact, especially by means of text messages and Facebook. One mother noted that her daughter lives in Weipa where her husband is now working at the mines and telephones her every week: 'I miss her. She is my only daughter.' In this community of high unemployment and welfare dependency, automatic reminders of appointments and job vacancy alerts sent to job seekers and welfare recipients are extremely useful. As the service provider who assists residents to find work stated, 'Mobiles are definitely important. When the reception goes down, our whole world crumbles.' Elderly people and others needing treatment receive important messages by mobile phone from the Clinic regarding appointments, and some doctors have started texting patients to make appointments. As the daughter of a diabetic patient noted, 'it is a real issue that they are contactable.' Residents use their mobiles to receive and pay bills and undertake their banking. For example, one young woman had bought a car and found it convenient to phone through her fortnightly payments on the loan. In an isolated community, residents enjoy using their mobiles for listening to music, downloading game apps, taking photographs or 'for everything!', as one woman noted. This, no doubt, contributes greatly to individual well-being in a community with limited entertainment options.

Enrolment of the small service providers is also obvious in Kowanyama. The 'fly in, fly outs' are, like the residents, completely dependent on the mobile network when they visit the community, usually for one week at a time. The main difference is that they use mobile phones for communication, such as phone calls, combined with mobile broadband to do other aspects of their jobs. The mobile broadband effectively means that these visiting service providers do not need to have a permanent office but can instead operate out of a 'mobile office', based on their mobile phone, laptop and wireless dongle or modem. The convenience of doing this obviously outweighs the disincentive of a network with insufficient bandwidth for business use and that slows work down considerably. For example, one of the small service providers noted that, despite using an online system which had been designed specifically for remote area conditions, 'it takes 2 hours to lodge results, a job that should take 20 minutes'. This same service provider stated that she often works back to 10

o'clock at night to finish work which would normally have been completed at 5 pm, all because of the slow speed: 'It's been five minutes from one click to another.' This would lead to increased costs of operation.

In contrast to the residents and small service providers, the businesses and large service providers use a much wider variety of ICT, which varies with the size of their organization and their information and communication needs. Mobile phones and mobile broadband have been enrolled into their business use to varying degrees. Some small shops and cafés are still dependent on dial-up connections because they find the mobile broadband too slow, and some still have unnetworked cash registers and so they can only make cash sales. One even uses a fax machine in preference to mobile broadband to place purchase orders, an old technology, but very reliable. Another shop depends completely on mobile broadband for all stock orders, EFTPOS and email communication: this embracing of mobile technology has come at a cost, however, since when the network slows, particularly at peak usage times such as lunchtime and weekends when everyone is texting and using Facebook, it might take two hours to place 10-15 items in the ordering system. The largest enterprises which are part of a national- or state-wide system are immune from most of these problems as they are more likely to have dedicated technicians, ADSL connections, their own servers or enterprise intranets.

One of the most notable features of all the businesses and large service providers is the deployment of workarounds and the building in of redundancy to account for the inevitable times in the Wet when systems fail. This shows a systems maturity which would have been unheard of even a few years ago. This is particularly the case for those businesses providing food and other vital services to the community. Obviously this level of redundancy comes at a price in having to purchase and maintain more technology.

3.3 The Event

To describe the cyclonic weather event itself, the local communication channels are invoked, firstly the Post Office noticeboard displaying a bulletin from the Mayor on Monday, the ninth day of rain:

Notice from Kowanyama Aboriginal Shire Council
10 am February 10th
Airport remains closed due to drainage issues and high level of Magnificent Creek will slow the airport floodway draining away.
Pormpuraaw Airstrip may be open to RFDS [Royal Flying Doctor Service] flights and helicopters.
Telstra – Mobile communications are out and Telstra is investigating options to get a repair team into the area.
Pormpuraaw has no communication except satellite phone. They are trying to get Internet restored today.
Postal – delay will be experienced due to Airport Closure.
Unsealed roads in Kowanyama Shire including Shelfo, Landing and Topsy are closed to all traffic.

At the same time as this official notice was on view in Kowanyama detailing that the town and shire were cut off from the rest of the world – even the TV and radio were not working – a rumour was circulating in the Post Office queue and elsewhere. This stated that the reason for the mobile network failure was that, after nine days of constant rain, the solar batteries which provide power to the mobile tower had become depleted due to lack of sunshine. Proof of this assertion was that on Tuesday, when the sun came out again, the mobile network was working again. This was also said to be the day when the repair team made their visit. The notice and the rumour were ways in which different actors in the network tried to make sense of the event.

Putting aside the competing claims of the sun and the Telstra technicians for restoring mobile communication, the mobile network failure had a major effect on many residents of Kowanyama, as evidenced by stories that they related to the researchers. Firstly, mobile phones are used in emergencies, most likely to occur in the Wet when network failures also happen. When the mobile network fell over, one resident was anxious about reporting electrical faults and overflowing sewerage at her home but couldn't with her mobile not working. Moreover, this happened on the weekend when the Council Office was closed and so she could not report the faults in person: 'It was quite serious.'

The weather event coincided with the beginning of the school year. At this time two-thirds of the children of high-school age were already at boarding school. Parents were unable to let their children know that everything was all right in Kowanyama when the news down south was full of reports of the torrential rain, making the children worried about their families. The beginning of the school year is always the most intense: the first settling-in period is crucial for students if they are to enjoy academic success: 'It's absolutely vital for kids well being. The kids get distressed if they can't contact parents. Parents get distressed if they can't contact their kids.' Moreover, there was still a plane load of children who were due to fly down on the Monday the bulletin was placed on the Post Office noticeboard: Transition Support Services had to ring the boarding schools to say that the students would not be coming. Eventually a satellite phone was located to make this call.

Similarly, all the new schoolies, who had recently arrived in Kowanyama to begin teaching at the local school, were cut off from their families down south, as they, too, were dependent on their mobiles. Their families were worried because they had heard about the cyclone buzzing around but no-one could get through.

The small service providers were impacted by the event in a different way: they stopped flying. With cancelled planes and the airport closure, they stayed put in Cairns or wherever they were based until the sun came out and the water drained from the airstrip. None of their clients in Kowanyama would have expected to see them.

The businesses had yet another experience. None of them fell over this Wet season. Their redundant systems stood them in good stead. One of the shopkeepers described how he moved all his mobile broadband systems to dial-up when the mobile network ceased working. However, this was extreme-

ly time-consuming and laborious, taking about 1½ hours to move to dial-up and another 1½ hours to move back to mobile broadband when the network was restored. In addition, transaction speeds slowed considerably and levels of customer service declined, but at least he could continue to operate and his customers could continue to make purchases if they were patient.

Another small shopkeeper described the impact of a cyclone two years before when both landlines and the mobile network went down. His cash register, which operates solely off the landline, was not working and so customers could only purchase goods for cash, which many of them did not have. It was Christmas and New Year and they were very upset when they could not buy food.

Other stories emerged, stimulated by the event, stories relating to lack of coverage beyond the town of Kowanyama, where the mobile footprint has never reached, lack of coverage which impacts in the Dry when the roads re-open. The experience of coverage by residents, managers and staff was very variable, depending on the exact location, the model of phone, the weather at the time, and if they were talking or texting. Most agreed that coverage probably extends 8-10 km from the Water Tower, up to 17 km sometimes for text messages. Coverage was a major issue: as one manager stated, who has been a resident in Kowanyama for several decades, 'It's a safety issue. This is an unforgiving area.'

The inadequacy of network coverage impacts on the majority of people in Kowanyama, whatever their role, since fishing and camping are favourite pastimes in the Dry season: 'The signal does need boosting. … If there is an accident, a child breaks a leg, or someone gets bitten by a taipan, you need to be able to make a phone call.' In addition, there is an influx of fishing tourists at this time of year, who represent a significant source of income for the community through the issue of camping permits. A culturally significant aspect of Aboriginal life in Kowanyama are the 18 Homelands, which are visited in the Dry by the traditional owners. They are very important to Aboriginal people, who are active fishers and hunters: 'We do go out a lot. If we get stranded we can't contact the community.' Lack of mobile coverage has raised major concerns amongst interviewees about personal safety in the event of breakdowns, accidents and illness in these areas.

Furthermore, the limited mobile footprint impacts on mobile reception along the major roads in and out of Kowanyama. With family members living in other towns and residents needing to shop or transact business in the cities, trips by car along the unsealed roads to Cairns, Normanton and Pormpuraaw are common in the Dry. As one resident noted, 'There is a real issue with mobile phone coverage when travelling by car. For example, it is 500 km to Chillagoe and no coverage until you get there.' These roads are also much travelled by service providers, contractors and tourists. Each road has its challenges but none are good. Breakdowns are particularly common and people get stuck between creeks when waters rise suddenly after torrential rain. One resident told of how her vehicle got bogged in Scrutton Creek at the beginning of the Wet: the only option for her and her husband was to climb onto the roof of the vehicle and wait for help. They clung there for 4½ hours, getting terribly sunburnt, until close to dusk, the water almost to the roof, afraid to move because a large crocodile was known to live in that stretch of the creek. Eventually, a helicopter from a nearby cattle station came to their rescue.

4 Mobile Technology and Kowanyama: Reflections on Culture and Place

It is very easy to fall into cultural stereotypes when considering technology adoption. We can see this in comments in the literature on how mobile phone use by Aboriginal adolescents is 'consistent with their collective culture (e.g., communicate with family and friends)' (Johnson, 2013, p. 1). During the event at Kowanyama, many residents wanted to communicate using their mobiles, but couldn't. There were the mostly Aboriginal parents and children away at boarding school, and the mostly non-Aboriginal schoolies, some separated probably for the first time from their parents. All felt distress. Similarly, major concerns about safety on the roads to Cairns, Normanton and Pormpuraaw surfaced in conversation with many residents, regardless of their cultural background, with many stories such as the person who broke a limb, an elderly contractor who rolled his vehicle, a local manager who was found wandering dazed in the wrong direction after rolling his vehicle 20 km out of Kowanyama, and the contractors who bled to death by the roadside, unable to get help. Likewise, the lack of mobile coverage at the local fishing and camping spots was a real worry, and not confined to a single group. In instructing us to set aside arbitrary preconceptions, ANT allows us to recognize, in this story, all humans as part of a collective culture, all as social beings with a primal need to communicate.

Perhaps of more use in interpreting the situation at Kowanyama is to talk of place, and cultural practices associated or determined by place. Place is a contested concept, and even more so when talking about mobile technologies. However, in the far isolated corners of the country, concepts of place and mobile become distanced from the definitions that hold at the centre, and, while the words may be the same, they develop 'local' understandings. Mobile usually implies being free of place – 'anywhere, anytime' – yet here mobile means 'works within a few kilometres radius of town'. Thus mobile use at Kowanyama is very much tied to place. Location, also, is not sufficient to capture the significance of place for the Aboriginal people who are living in Kowanyama, a remote township created on or adjacent to their traditional lands.

We recognise that justice cannot be done to it in this paper, so a limited version of place will be used. Gibson, Lukermann and Brennan-Horley (2012, p. 5) describe place as 'a process involving complex integrations of nature and culture that have developed and continue to develop in particular locations and which connect flows of people and goods to other places'. Place and culture are inextricably intertwined in Aboriginal communities, given Aboriginal occupation of their land *ab origine*, from the beginning: place represented traditionally in language, story, performance and art. But place is also reflected in the cultural practice of non-Aboriginal residents and visitors to the region, as they camp and fish, spending their weekends and holidays in ways often difficult to distinguish from their Aboriginal counterparts, in identical locations – Topsy and Shelfo, if not South Mitchell, which is off-limits for all but traditional owners.

For *this* story, place is a lead actor: Kowanyama, the very beautiful 'place of many waters', for a time became a place of *too* many waters as rain and flood

interacted with the sun (or lack thereof), the soil turning to bog, the impassable roads, overflowing sewerage, failed communications and infrastructure, the people, the memories of previous floods, the business, health and educational interests, all coming together to make this a significant event. A place that was safe and connected lost its connections to roads, power, satellite and mobiles, and the radio took on an aberrant life of its own as the township teetered on the brink of a natural 'disaster'.

In remote areas like Kowanyama mobile is not an extension of person as in well serviced urban areas. It is much more contingent, an odd, unreliable prosthetic that works partially or fully, depending on where people are, not on when they need it. In a perverse way it works best when at home, within walking distance of services and surrounded by family, and worst when out hunting, camping or travelling, far away from services they might require, for example, in case of accident. The need for mobile technology changes depending on location: social, business and service facilitator when in community, a desirable safety net when travelling (but rarely, since mobile coverage usually does not allow), and an umbilical cord when away visiting other communities, towns and the city. In a strange way, technology is still reinforcing missionary times where people were gathered together from across the region and it was dangerous to leave. While focusing on the event, it is necessary to acknowledge that there is a particularly strong association with place, and that mobile technologies are, if anything, reinforcing connection with place, as Kowanyama is the one place they actually work until the traveller arrives in the city and connects again, back to country.

5 Conclusions

ANT, with its insistence on impartiality towards all actors, has allowed us to reflect on mobile technology adoption in a remote Aboriginal community, setting aside preconceptions and boundaries, of human and non-human, of culture and race. Defining the human actors dispassionately according to their use of mobile technology, it can be seen that all relied on their mobiles. They were united in recognizing that mobile technology fulfilled a fundamental human need for communication in a way that computers and fixed-line phones and wired Internet connections had never done. As Brady and Dyson (2010, p. 79) concluded, 'there is a huge motivation for owning mobile devices whoever you are, whatever your cultural background.' However, place interacted in perverse ways with this need, preventing communication when most desirable, when cars broke down in crocodile-infested creeks, or camping accidents occurred, or parents needed to contact their children away at boarding school.

Translation of the network was evident over time as the community enrolled as users of increasingly sophisticated mobile phones, and mobile broadband became a preferred work tool of Internet connectivity for many. This adoption of mobile technology is all the more remarkable, given the low incomes of many of the residents, the limited mobile footprint, and the poor performance of mobile broadband for the small service providers and some businesses which depend on it. In a time of deluge and water that would not

obey the drains and channels established for its reception, mobile technology became inaccessible and unhelpful. Yet, the community at Kowanyama remained faithful to it: the sun came out, the network bounced back, and residents and businesses returned to a life with mobiles, provided they did not venture too far beyond the town.

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'HUEHUEHUE' 'BR?BR?' THE CARNIVALESQUE GRIEFING BEHAVIOUR OF BRAZILIAN ONLINE GAMERS

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Abstract: *This paper describes and discusses the conflicts between Brazilian online gamers and the players from other countries. Two questions are addressed: what, if anything is specific to the disruptive behaviour of Brazilian players and how do they handle the association between their reputation and their nationality. Answers to these questions are strongly interrelated: Brazilian gamers often act in groups, and the use of nationality as their identity marker is decisive in the quickly and spontaneous formation of these groups. Brazilian players take advantage of the wide ambiguity of the comedic in multicultural environments and the carnivalesque tone is probably its most remarkable feature of their behaviour.*

1 Introduction

The presence of Brazilians on the internet has increased rapidly during the last decade. By the end of 2012, the number of Brazilian internet users is estimated at 80.9 million (Barbosa, 2013, p. 166), who spend more time online, on average, than other nationalities (Ibope, 2006-2013). The usage of Social Network Sites (SNS) by Brazilians is notoriously high (Dantas & Dodebei, 2010; Chao, 2013; Mizukami, Reia & Varon, 2013), reaching 73% of the Brazilian internet population. Despite not being as high, the percentage of Brazilian internet users who play games online is not irrelevant: at 33% it represents more than 26.6 million people (Barbosa, 2013, p. 485).

The fact that the most common uses of the internet in Brazil are entertainment and social interaction is usually attributed to the sociable and good-humoured nature of Brazilians. However, many records of the Brazilian presence on the internet contradict that image, indicating instead a tendency toward conflict and aggression, particularly in their interactions with people from other countries. The best known example of an online confrontation involving Brazilians took place in *Google's* SNS *Orkut* in 2004 and has been registered in the Proceedings of a previous CaTAC Conference (Fragoso, 2006).

At the 10th anniversary of the Brazilian invasion of *Orkut*, the epicentre of the conflicts between Brazilians and non-Brazilians appears to have migrated to multiplayer online games (MOGs). The level of disruption and aggressiveness of groups of players that present themselves as Brazilian has escalated to unprecedented levels. Identified by the use of infamous memes, most notably 'HUEHUEHUE' and 'BR?BR?'[1], these gamers (and their actions) are the object of the discussion presented in this text. For convenience and by habit, I will refer to the players as 'the HUEHUEs' and to their actions as 'huehueing' ('to huehue' – huehue, huehued, huehueing). The leading questions are:

1. 'HUAHUEHUE' is supposed to be the sound of a laughter and 'BR?BR?' is a call to identify other Brazilians in the game.

- is there a difference between the actions of the HUEHUEs and the modes or style of disruptive behaviour perpetrated by gamers from other nationalities? (or, do Brazilians misbehave differently from others?)
- how do the HUEHUEs deal with the association between their online presence and their national identity?

Examples are better suited to the nature of the discussion intended in this paper is than either statistics or demonstrations. Data was obtained with a) an online survey responded by 511 internet users between 28 October and 28 December 2013 and b) cascading searches, starting with the HUEHUEs' best known memes via *Google and Reddit* and in the forums associated with *Steam*, *World of Warcraft*, *League of Legends* and *Dota2.* References to stigmatization were obtained with searches by nationality in the same sources. More than 100 webpages, images and videos were considered relevant and incorporated into the dataset. All URLs were last checked in 04 May, 2014.

2 The HUEHUEs

The 'Brazilian invasion' of *Orkut* was not the first or the last conflict between Brazilian internet users and users of other nationalities. One year before, two other confrontations had already taken place - in all three cases, the main target appear to be users from the U.S. (Kahney, 2003; Fragoso, 2006). The reasons for this eventual 'preference' involve a complex set of socio-historical factors, which are beyond the scope of this text. A description of the first of these events helps to understand the tone of the disagreements between Brazilian and U.S. internet users.

In 2003, 'serious users' of *Fotolog,* a photo-blogging and SNS, started to complain that Brazilians were spoiling the service by posting a large number of bad quality pictures of themselves. At first, the founders of *Fotolog* appear to have ignored these complaints and considered the practice harmless (Kahney, 2003). However, the "artistic New York photobloggers" were loud about their aversion to sharing *Fotolog* with the "sexy Brazilian cam girls" [2] and their "saucy webcam portraits" (Kahney, 2003). Such stereotypical references to Brazilian women are likely to have fuelled the increase in *Fotolog's* popularity that is said to have made it impossible to maintain the service free of charge. When Fotolog created its 'gold camera' service and restricted the free use of the service to a single picture per day and up to 5 comments, Brazilians members were upset and flooded the service with protesting images and angry comments, which were responded to with angrier and even more insulting pictures and comments[3], in an escalating battle.

The other conflict from 2003 happened in a multiplayer game, *Ragnarok Online* (RO), where some of the best known huehueing memes are said to have been created. It started as most other such confrontations: with the Brazilians insisting on using Portuguese in areas where other players considered that the only acceptable language was English. Brazilian Ragnarok servers were created, but most players did not migrate to them. Servers that adopted stricter

2. http://gothamist.com/2003/06/04/fotolognet_revolution_volta.php
3. http://photodude.com/2003/06/09/the-defreeing-of-fotolog

rules about language attracted more English speaking players, who abandoned areas where Portuguese (and, probably, by that time, also other languages) were used. By the beginning of 2004, players were being banned for using any language other than English in US-based servers.

> *Needless to say, many Brazilians were banned on the spot. A huge uproar in the Brazilian community occurred. In a certain Brazilian forum (...) they would organize raids and clans to fight English Speakers on english servers*

> *Huge groups would reach max level and travel in packs on PVP servers and ask "BR?"(…) If you failed to reply in Portuguese, they would camp you, sometimes for hours speaking poorly worded english insults suggesting you log off. This led to an intense hate of Brazilians on these RO servers. Huge clans would form anti-BR Brigades and hunt down Brazilians. It became an all out war. (GreenEyedMonster, 24 June 2012[4])*

The confrontation spread to other games[5] and continues to this day. It is unlikely that the percentage of HUEHUEs is significant in relation to the total number of Brazilians who play MOGs, but the relation between huehueing and Brazil became a stigma for Brazilian gamers. The following conversation was motivated by a widespread cartoon that supposedly tells the story of the invasion of RO by the HUEHUEs[6]:

> *Ugh I hate brazillians [sic]. If you've ever played a not so popular mmorpg, then you'd know how annoying their shit American [sic] grammar is. Since they suck so much, they ask for money and items. This is why I quit online games. Now it's come back to haunt me (Anonymous, 31 December 2009[7])*

> *You should play some Valve games or something. I've only met like 1 non-American in l4D, and he raped a tank with his eyes.* (Anonymous, 3 January 2010[8])

At the time of writing, it is easy to find Brazilians who claim to have been insulted for minor reasons, such as using BR as part of their names. Some respond angrily, others hide their nationality. The comments below were motivated by a post in *Reddit* that links to a video in which a monkey with the face of a HUEHUE teases a dog using the HUEHUEs memes:

> *I'm glad I am a brazilian, not a [sic] "american" (because the rest of the continent is not american, right?). Otherwise I'd be an obese redneck who*

4. http://forums.na.leagueoflegends.com/board/showthread.php?t=2276298
5. For example: *Tibia*, *Lineage*, *Wolrd of Warcraft*, *DotA* 2, *League of Legends, DeadZ*.
6. http://i0.kym-cdn.com/photos/images/original/000/135/593/brfw0.png
7. http://lolbot.net/index.php?content=viewer&vmode=random&id=2956#.UwqzwYXdeZo
8. http://lolbot.net/index.php?content=viewer&vmode=random&id=2956#.UwqzwYXdeZo

thinks that the Iraq war was correct, or that Jesus was real. Brb: getting some Mc Donalds [sic] burgers. Yep, stereotypes hurt, heh. (*stephangb*, 2012[9])

I'm Brazilian and I was about to defend my fellow countrymen. until I remembered how many times I told Brazilian players to piss off in both English and Portuguese. There's a reason why I keep my nationality (and gender) a secret in games, mostly to avoid the massive racist backlash which occurs when one discovers my nationality. (*nenssa*, 2012[10])

HUEHUE and BR? BR? are also used with pride. Especially after the publication of a brief article and an infographic about the bad reputation of Brazilians in MOGs by the newspaper *Folha de S Paulo* in May, 2013[11], these memes appear to be spreading to non-gaming environments. In October 2013, Sony announced that its newest console would be sold in Brazil at a very high price. The news was received with jokes about Sony "shielding the rest of the world from Brazilians online"[12] and *Folha de S. Paulo* re-heated its previous article with a lamentable headline: "Foreigners commemorate PS4 prices in Brazil for keeping Brazilians away"[13]. The infographic was reproduced in various Brazilian game forums and blogs, accompanied by criticisms of the HUEHUEs[14] or, less frequently, of the newspaper[15]. The following are approximate translations of the names given to the actions attributed to the HUEHUEs in the infographic, with summarized versions of their descriptions:

- Virtual begging – asking for money or equipment ('gibe moni plox') instead of playing to earn them;
- Assault – threatening to report other players if they didn't give what was been asked ('gibe moni plox' combined with 'I report u');
- Creative begging – artistic performances (such as dancing or reciting) to be given money or equipment;
- Pillage – simultaneous robbery by a large number of gamers;
- Friendly fire – joining a team to deliberately ruin its chances instead of collaborating;
- BR?BR?BR? – repeatedly shouting or writing BR? or BRASIL? in the

9. http://www.reddit.com/r/wow/comments/wwi6u/so_i_made_a_toon_on_warsongus/c5h9sct
10. http://www.reddit.com/r/wow/comments/wwi6u/so_i_made_a_toon_on_warsongus/c5h5wsx
11. http://www1.folha.uol.com.br/tec/2013/05/1280744-brasileiros-ganham-fama-ruim-praticando-assalto-e-arrastao-em-jogos-on-line.shtml
12. http://www.destructoid.com/playstation-4-will-cost-1-850-in-brazil-263741.phtml#comment-1086305077
13. http://www1.folha.uol.com.br/tec/2013/10/1358688-gamers-comemoram-preco-do-ps4-no-brasil-por-manter-brasileiros-longe.shtml
14. http://www.madjoystick.com/2013/05/a-ma-fama-dos-brasileiros-nos-jogos.html and http://www.donasdecasawow.com.br/nao-seja-um-huehue-br-isso-nao-e-legal/
15. http://criticasobvias.blogspot.com.br/2013/05/o-brasileiro-na-internet-huehue-hue.html

open chat to find other Brazilians, independently of the disturbance caused to other players;

- Racism – when other players associate their behaviour with their nationality, Brazilian gamers accuse them of racism ('thas raciss')

To my knowledge this list remains uncontested and, in my experience, it is a reasonable account of the behaviour of the HUEHUEs. However, a common complaint about the HUEHUEs in specialized forums and blogs has not been mentioned in the infographic: that Brazilian gamers don't know English[16] or refuse to speak English despite being able to[17]. Creative begging, on the other hand, has not been mentioned by any other source and was not known of by any player I had the opportunity to ask. It is easy to find references to Brazilian gamers spamming open chat channels with their memes, begging, assaulting, letting their teams down and then accusing others of racism for responding to their provocation.

There are several opinions about the reasons behind the HUEHUEs' behaviour, for example: that it is a development of the hatred initiated in Ragnarok[18]; that the HUEHUEs are poor children playing in public places[19] or who have "minimal computer and internet access for free"[20]; that Brazilians are unable to play properly because of the geographic distance to the U.S and low quality of the internet in Brazil[21]; that they are unskilled and not committed to the team and the game. The behaviour of the HUEHUEs has also been associated to Brazilian culture in general, with huehueing being said to mirror daily life in Brazil[22]. Curiously, this last idea is popular amongst Brazilians. During an interview to *Folha de S. Paulo*, the CEO of a Brazilian company dedicated to online games declared: "We can affirm that this is not a problem that originates in the game. The player, in online worlds, is a reflection of how he lives in real world"[23]. This assertion was reproduced in several blogs and websites as being the final word on the matter. Despite being true at one level (as online and offline are tightly intertwined and inseparable), it can be dangerously taken at face value, as if Brazil were populated by beggars, robbers and street gangs that shout HUEHUEHUE (or laugh like that).

One common point in all these opinions is that they are no more than that: opinions. None of them is based on consistent evidence or on a sufficiently sound rationale. Some of those ideas are even in contradiction with what is known about Brazilian internet users, who, for example, are neither mostly

16. http://forums.na.leagueoflegends.com/board/showthread.php?t=2276298&page=2 06-24-2012
17. http://forums.na.leagueoflegends.com/board/showthread.php?t=2276298,
18. http://forums.na.leagueoflegends.com/board/showthread.php?t=2276298
19. http://www.reddit.com/r/wow/comments/150vxe/is_anyone_else_frustrated_by_grouping_with_latin/
20. http://forums.na.leagueoflegends.com/board/showthread.php?t=2276298
21. http://www.awesomenauts.com/forum/viewtopic.php?f=6&t=24685
22. http://forums.na.leagueoflegends.com/board/showthread.php?s=&t=548941&page=2 and http://forums.na.leagueoflegends.com/board/showthread.php?t=2276298&page=3
23. http://www1.folha.uol.com.br/tec/2013/05/1280744-brasileiros-ganham-fama-ruim-praticando-assalto-e-arrastao-em-jogos-on-line.shtml

children nor especially poor (Barbosa, 2013). More importantly, none of these opinions has challenged the fundamental and unproven assumption that the behaviour of the HUEHUEs is different from those of other gamers who participate in disruptive practices. In this paper, I try to identify some similarities and differences between huehueing and other patterns of online aggression reported by previous literature.

3 Spammers, Trolls and Griefers

Three styles of disruptive behaviour in online environments are directly related to the behaviour of the HUEHUEs: spamming, trolling and griefing. Each of those has been traditionally associated with a specific type of action, which previous authors have studied in specific online environments, such as *Usenet* Groups (Donath, 1998), feminist forums (Herring *et al*, 2002) or the *Wikipedia* (Shachaf & Hara, 2010). My choice to focus on the HUEHUEs and their practices broadens the scope of the discussion: huehueing originated in MOGs and remains heavily associated with Brazilian games and gamers. However, as the examples used in this text demonstrate, huehueing spread from the game-worlds to forums and sites dedicated to games and to other areas of the internet such as *Facebook*.

By structuring this section according to the division between spamming, trolling and griefing prevalent in the literature, I do not intend to imply that the separation between them is clear-cut or that they are mutually exclusive: the behaviour of the HUEHUEs is proof that, in practice, they can be indistinguishable.

3.1 Spammers

Nowadays, 'internet spam' is frequently thought of as 'email spam', massive amounts of unrequested email messages intended for physhing or advertising, usually spread by bots. However, spam is not always distributed by email or even automated. In the context of games, spam has been defined as "[c]opious amounts of unwanted text whose volume is so great it renders its content useless or pointless", and the action of spamming has been described as "generating so much text that its sheer quantity is offensive regardless of its content" (Hess, 2003, p. 29). This is the case of the repetition of HUEHUEHUE or BR?BR?: the memes themselves are not insulting, it is the way in which they are used that is offensive.

Stivale classified the motivations for spam in a crescendo that goes from 'playful' to 'pernicious' spam. Between these two extremes lie 'ambiguous spams' (1997, p 133). In this initial sub-section, I will try to maintain the exemplification of Stivale's categories within the limits of the previous definition of spam, but his own examples cover a very broad range of disruptive behaviour and can be adopted to refer to huehueing in general. The least harmful type of spam would be 'playful spam', such as gamers teasing each other in silly and innocuous ways, as part of a shared joke. On the other extreme of Stivale's categories is 'pernicious spam', in which the messages repeated are ostensively

aggressive. Along the line that crosses from one extreme to the other, spam become 'ambiguous': jokes can be understood as aggression and acts of aggression can be taken playfully. For example, it is possible that (at least in some cases), despite being exaggerated, the repetition of BR? BR? was not meant to be spam, but an attempt to locate other Brazilians in the game to form a team. Another example is the playful use of the meme HUEHUE in game forums and SNS, a joke that easily becomes annoying and therefore, on the receiving end, is pernicious spam.

HUE?
HUE? HUE? HUE? HUE? HUE?
hue hue hue hue hue
hue
hue
hue
hue
hue
hoehoehoehoehoehoehoe
milliondollarhoes

(several users, 14 July 2013[24])

The traces of interactions with HUEHUEs encountered in forums, blogs and SNS indicate that replying to their spamming as if it is of the playful type (for example, with the same meme) or ignoring them tends to interrupt the huehueing. This suggests that the HUEHUEs crave attention, a characteristic often related to the concept of troll.

3.2 Trolls

Online references to trolls are commonly associated to legendary beings that hide under bridges waiting for an opportunity to make some mischief. A different origin is reported for example by Donath (1998), who recalls a 1995 message in a discussion list warning that a participant could be 'trolling a baited line' at the others[25]. The latter appears to be a closer analogy to the current understanding of internet trolling as sending provocative messages (in mailing lists, forums, SNS) with the intention to incite conflict. However, trolling does not need to be a proper message: attacks on Brazilian players are often used as bait, and several HUEHUE's memes are also basically baits.

Morrisey (2010) discussed the pragmatics of trolling in terms of three elements: the 'high-order intention', 'informative intention' and 'stimulus'. The first (high-order intention) is the troll's overall plan, that is, what the troll really wants to achieve by trolling. The second (informative intention) is the content of the troll's utterance, i.e., what the troll effectively says. The third (stimulus) is the strategy applied to achieve the high-order intention, the provocation. Most

24. http://www.reddit.com/r/leagueoflegends/comments/1ia7ic/attack_of_the_huehuehuehuehue

25. "Are you familiar with fishing? Trolling is where you set your fishing lines in the water and then slowly go back and forth dragging the bait and hoping for a bite. Trolling on the Net is the same concept - someone baits a post and then waits for the bite on the line and then enjoys the ensuing fight" (Unidentified author, 1995, cited in Donath, 1998).

of the time, the troll's high-order intention is to make others seem foolish by taking the bait and reacting to it: this requires witnesses of the trolls' targets being made fools of. Trolls seek attention (Herring *et al.*, 2002; Morrisey, 2010; Shachaf and Hara, 2010), and their intended audience can be more important for them than their victims. This is a possible explanation for the existence of criticisms of Brazilians that appear to be no more than bait.

In spite of trolls' preferences for easy targets (Herring *et al.*, 2002), the more experienced the deceived, the cleverer the troll appears to be. Fooling someone who is considered an expert or authority would be particularly rewarding. The *Wikipedia* trolls, for example, are known to contribute biased content to provoke other contributors with the high-order intention to report their reaction and have them blocked by an administrator[26]. The HUEHUEs act similarly when they provoke top ranked U.S. players asking for money or equipment ('gibe moni plox') to induce violence against them and then report the other gamer to the moderators for racism.

Another motivation for trolling is that it is fun. The internet is seen by many users as a permanently available entertainment venue. The trolls of (the Hebrew version of) *Wikipedia* interviewed by Shachaf and Hara (2010) explicitly talked about "the joy they get from vandalizing". Differently to other types of vandals who attack the *Wikipedia*, those trolls didn't get much pleasure in damaging the encyclopaedia's entries: their targets are the people, and they are motivated by "revenge on the community or on some members of the community" (Shachaf and Hara, 2010). By attacking the community that gives support to the existence of the *Wikipedia*, these trolls can cause the destruction of their own territory, as the HUEHUEs have caused game servers to be shut down, or the blockage of Brazilian IPs in RO and other games. Noticing this similarity is important as the findings of Shachaf and Hara indicate that ways of trolling that can cause the destruction of the troll's own territory are likely to be motivated by revenge and hate. This suggests that these can be some of the motivations for huehueing.

A study of trolls in a feminist forum suggested that trolls who are driven by control and self-empowerment would target vulnerable groups, and trolls who attack stigmatized groups would be motivated by "hatred towards people who are perceived as different or threatening by the troller" (Herring *et all.*, 2002, p. 381). Thus, besides acting differently according to their motivations, trolls can also attack in different ways depending on the profile of their target group. The same authors foresaw the possibility that different trolling patterns could be found if the target was a mainstream group rather than a minority group. They did not consider that the trolls could be members of a minority group and their target a mainstream group, as appears to be the case of conflicts between Brazilians and U.S. internet users. Records in game forums and SNSs reveal that the HUEHUEs see themselves – and are seen by other players – as a sociocultural and economic minority from a peripheral nation, whilst the U.S. players are considered – and consider themselves – to be a dominant group.

The HUEHUEs preference for group action can be a consequence of this inversion in the direction of trolling; a strategy that makes it possible for the

26. http://en.wikipedia.org/wiki/Wikipedia:Don't_take_the_bait

minority (the weaker) to attack the dominant (the stronger). It would also be an individual protection for each of the lower ranked players attacking the higher ranked players.

One of the decisive factors that make it possible for the HUEHUEs to attack in groups is the use of identity markers. Their memes, in particular, identify the HUEHUEs by nationality (explicitly in BR? and implicitly in HUEHUEHUE). Combined with the insistence on the use of Portuguese in English-speaking servers and corruptions of the language of the HUEHUEs' target group (such as 'thas raciss') converge with the recognition of language markers as "the online world's most deliberate identity signals" (Donath, 1998). Through the use of memes that appear to be childish or noob talk (such as 'gibe moni plox'), the HUEHUEs exaggerate their supposed dumbness and ignorance and appear to be mocking themselves. The high-order intention, however, can be different: the pretence of lack of intelligence and the apparent impossibility of communication can be a strategy to ridicule the U.S. players who complain the HUEHUEs cannot speak English and those who say that they are children or unskilled players. If taken seriously, these memes can turn the power relation inside out, victimizing the HUEHUEs and causing the U.S. players to appear arrogant, self-important and unprepared to deal with the multicultural reality of the internet: a typical case of successful trolling.

The strength and frequency of the HUEHUEs' language markers are decisive in the construction and reinforcement of their sense of community. However, the literature on trolls depicts them as loners: the gregarious behaviour of the HUEHUEs is more akin to that of griefers.

3.3 Griefers

Griefer is a word more commonly used to characterize those who engage in disruptive behaviour in MOGs. The high-order intention of a griefer is to spoil the game for other players and, in this sense, griefers play their own game, one in which the objective is to impair the pleasure of others and, at the limit, to cause pain. This broad definition implies that griefing can be done in many different ways, including spamming and trolling.

Chen, Duh & Ng (2009) and Lin & Sun (2005) described griefing in similar terms to those used by *Folha de S. Paulo* in relation to huehueing: begging, robbery, extortion and gang formation. Achterbosch, Miller & Vamplew (2013) compiled many types of griefing actions from previous literature and organized them in 15 categories. Those were the basis for their study of the convergences and divergences in what is considered acceptable behaviour in Role-Playing MOGs by players who see themselves as griefers and players who think themselves victims of griefers. Many – but not all – forms of huehueing scored high in the list of actions considered griefing by most players (perpetrators and victims): spamming, verbal harassment, blocking, camping, scamming, and damaging their own team.

By 'hunting in packs', many griefers, as the HUEHUEs, take greater advantage of the relative anonymity of the internet. In multiuser environments, the technological anonymity is reinforced by the anonymity of the crowd. Chen, Duh & Ng (2009) studied the possible associations between griefing,

de-inviduation and "crowd behaviour", that is, the fact that, when immersed in a group, an individual feels at the same time indistinguishable and visible. This results in a reduction of the sense of responsibility and of inhibition, which in turn can lead to deviant behaviour. In the context of online gaming, the technological anonymity and the anonymity of the crowd can be reinforced by the supposedly well-defined boundaries between the game and the real. The excuse that 'it is just a game' can be a facilitator for the reduction in self-awareness and self-regulation. Thus, it is possible to say that online gamers act within three layers of anonymity: the first results from the technological mediation; the second from the crowd situation (each player is anonymous within his group) and the third from the protection of the "magic circle" that supposedly separates the game from the reality (Huizinga, 1970). The HUEHUEs group identity fills the gaps between those layers of anonymity: each player remains anonymous in the crowd of HUEHUEs, but the HUEHUEs are not anonymous in the internet. Therefore, each HUEHUE is at the same time anonymous and identified in the game environment: the offline identity of a HUEHUE is far from obvious, but a HUEHUE is not any gamer, not even any griefer; it is specifically a HUEHUE.

The nature of the identity markers used by the group imposes limits: for example, a 'real' HUEHUE must know enough Portuguese to reply when asked 'BR?', and failing the test is usually fatal for the character. On the other hand, an attack to one HUEHUE is an attack to all HUEHUEs and can result in an incredibly quick and coordinated response by the group of BRs present at the time.

Studies of disruptive behaviour in online environments are marked by a recurrent dichotomy, which divides griefers from griefed, spammers from non-spammers and trolls from victims of trolls. The underlying assumption is that human behaviour can be understood in dualistic terms. Lin & Sun (2005) adopted a more refined approach in their study of the Taiwanese griefers, called 'white-eyed'. They recognized that, in order to understand griefing, it was necessary to take into account the complete social dynamics of the game. This led them to the perception that the majority of players occasionally act in ways that are considered to be griefing and suggests the possibility that the HUEHUEs are not typically low ranked because of lack of skills or experience, but because players prefer to huehue with secondary characters, preserving their more powerful characters for 'normal' play. Huehueing would be the type of play that Lin & Sun (2005) call explicit griefing (as opposed to implicit griefing). Explicit griefers (such as the HUEHUEs) are obvious to other players and recognize themselves as griefers. Implicit griefers are not aware that their actions constitute griefing and do not see themselves as griefers or their actions as griefing.

> *Once I was playing PW with my boyfriend (...) a new guy entered the clan and started to brag about his char and insult everyone in all possible ways. Then my boyfriend said (...) "You must be swearing like this because you don't do shit in life. You must be a 13 year old wanker that does NOT have a girlfriend and spend the whole day alt-tabbing between pw and redtube*" (Survey Respondent #456)

The majority of players are capable of denying their own griefing through the construction of a clear-cut difference between themselves (supposedly, non-griefers) and the griefers. The positive identity of their own group is created and reinforced by the stigmatization of the griefers: a typical strategy of "othering" that emphasizes the distance between the two groups. This situation encountered by Lin & Sun (2005) in Taiwanese MOGs has many similarities to the relation between Brazilian and U.S. gamers.

All strategies of othering encountered by Lin & Sun characterized the group of griefers as weaker than the group of supposedly non-griefers. For example, the Taiwanese suppose that the white-eyed are children. By characterizing the white-eyed as youngsters, the other players reaffirm their superiority over them and, at the same time, find an excuse to forgive and justify their disruptive play (children grief 'by mistake', because they don't know better). The same logic appears to be behind the hypothesis that the HUEHUEs are children. In the case of the HUEHUEs, the attribution of poverty adds to this otherness and inferiorisation: the HUEHUEs are not only children, but they are poor uneducated children, who "lack computer skills" and play on public computers:

> *My Brazilian friend explained to me why most Brazilian players on WoW are annoying. It's because 90% of them are 8 year old kids playing in a cyber cafe.* (hard_to_explain, 2012)

> *Wow. If that is true, it really explains a lot.* (deleted, 2012[27])

In contrast to the implicit griefers, the explicit griefers recognise their actions as griefing. They have deliberately rebelled against the game rules and are responded to by stigmatization. In this, the cultural differences between the Taiwanese and the Brazilians are evident: the Taiwanese gamers react to being characterised as white-eyes with a claim of "professionalization", according to which there are rules to griefing and those who 'grief by the rules' are not white-eyed (Lin & Sun, 2005). These players accept the evidence of their griefing, but reject the stigma of white-eyed with the institutionalisation of their grief play and the othering of another (weaker) group. It is a double layer of stigmatisation, in which implicit griefers name explicit griefers white-eyed, and the 'professional' explicit griefers refuse that denomination and transfer it to the unruled explicit griefers. As the Taiwanese, the Brazilian griefers appear to have found a way to 'professionalize' griefing, but through a very different strategy. The HUEHUEs deal with othering and stigmatization by reaffirming, rather than denying, the separation between them and other players, notably those from the U.S. They reinforce their status as griefers by insisting on playing on U.S. servers even after the creation of servers in Brazil, and take possession of the stigma of being children or lacking skills with their noob and child-talk memes.

The difference in the ways that the white-eyed and the HUEHUEs deal with their stigmatization is a reflection of what is considered proper and im-

27. http://www.reddit.com/r/wow/comments/wwi6u/so_i_made_a_toon_on_warsongus/c5h74g3#c5h74g3

proper behaviour in Taiwan and in Brazil. The importance of this difference points to the fact that a proper discussion of the HUEHUEs and huehueing must take Brazilian culture and ethos into account.

4 A Nation of Griefers?

Brazil is not the only nation associated with disruptive behaviour in games. It is easy to find records of similar complaints about gamers from Russia[28], Poland[29], the Philippines[30], etc. However, there are peculiarities in the history of Brazilian online conflicts and in the patterns of these events that need to be discussed. To this end, the next subsection presents a brief review of some sociological theories about Brazil and the attitude of Brazilians towards foreigners.

4.1 The Cordial Masters

A solid starting point for a review of Brazilian national identity and the relation between Brazilians and people from other regions, especially North America and Europe, is the inversion of the idea of 'mongrelization' preconised by the white supremacists from the Northern Hemisphere:

> *The Brazilian elite (...) accepted the doctrine of innate white superiority, but they then argued that in Brazil the white was prevailing through miscegenation. Instead of "mongrelizing" the race, racial mixing was "whitening" Brazil. Miscegenation, far from a menace, was Brazil's salvation* (Skidmore, 1992, p.6).

Gilberto Freyre's book *The Masters and the Slaves*, launched in 1930, provided academic strength to this theory and emphasized the positive value of the miscegenation between the African slaves (and, on a smaller scale, the native indians) and the Portuguese in the composition of the Brazilian people. Freyre's writing style and eroticised descriptions of the exploitation and degradation of the black and indian women have created an exotic and soft vision of slavery in Brazil. This idea was nourished by the fictional romantic relationships between whites and natives, masters and slaves already present in Brazilian fictional literature and entered a cycle of mutual reinforcement with the image of a 'tropical paradise' advertised to induce the immigration of Europeans to Brazil between the end of the XIXth century and the first decades of the XXth To this day, the image that Brazil presents to the world – and to its own people, through the mass media – is this combination of positive and welcoming miscegenation, tropical exoticism and exquisite eroticism.

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28. http://forums.riftgame.com/retired-forums-threads/grand-archive/eu-shards/pve/icewatch/85612-why-do-russians-gamers-have-such-bad-reputation-all-over-world.html
29. http://forums.eune.leagueoflegends.com/board/showthread.php?t=662469&page=3
30. http://lolbot.net/index.php?content=viewer&vmode=random&id=2956#.UwqzwYXdeZo

Sergio Buarque de Holanda's *Roots of Brazil* (1936) contributed to this picture of friendliness and receptivity by spreading the notion that Brazilians are cordial men. To the author's disappointment, the widespread understanding of the idea of 'cordial man' is nearer to the one that he was refuting than to the one he was proposing. In place of the sociologist's interpretation, the version that became popular was that of the poet Ribeiro Couto, whose Cordial Man (with capitals) was naively ruled by emotions, is inherently hospitable and has a tendency for credulity (Bezerra, 2005, p.125).

Buarque de Holanda's cordial man is also ruled by emotions rather than reason, but his understanding of cordiality is not restricted to positive feelings: "Enmity can be as cordial as friendship, in the sense that one, like the other, comes from the heart" (Buarque de Holanda, 1995). To consider that the most typical feature of the cordial man is the strength of his emotions, and that these emotions are not necessarily positive, can be a valuable key to understand the passionate overtones of the online confrontations involving Brazilians. However, the emotional imperative of Buarque de Holanda's cordial man also drives him away from conflict, which is avoided at nearly any cost. This is verifiable in daily life in Brazil, but is not reflected in online interactions, which easily become confrontational even when no foreigners are involved (Recuero & Soares, 2013). Apparently, the technological mediation forces the abandonment of some rituals of Brazilian politeness, especially those intended to simulate 'familiarity'. In Brazil, it can be good manners to break anonymity with degrees of warmth that, in other cultures (particularly non-Latin cultures) are normally reserved to close friends and family. However, as Buarque de Holanda noticed, this closeness is superficial and ultimately meant as a '*pièce of résistance*': Brazilian 'friendliness' shields the cordial man from the need to handle impersonal relations, which are something he abhors. However, the technological mediation of the internet establishes a degree of impersonality in which most of the strategies to establish familiarity and 'warm up' interactions used by Brazilians in their daily life cease to be applicable. Even the need to communicate in writing complicates the task: the usual modes of interaction in Brazil oscillate between residual and secondary orality (Ong, 2001), that is, between the need to communicate by sound due to the maintenance of pre-literate attributes and the preference for sound typical of a post-literate society. Communication is made more difficult by the need to use of a foreign language: the majority of Brazilians know little English and have no need or motivation to learn the language, as English is really not used or even useful for daily matters in Brazil[31]. The use of languages other than English is a permanent source of tension between US players and players from other countries.

> *My English is very rusty, at times a word in Portuguese escaped, and then came the question: _Who is brazilian?*
> *(...) either I would say "Yes i a brazilian' or I tried to speak with my English that most of the time shows that a guy cannot speak correctly.*
> *The result usually was (...) to be kicked out of the group, no matter how well you could be playing, as for many the simple fact of being BR means you are not a decent player.* (*Grahal*, 13 September 2013[32])

31. Brazil is geographically far from any English speaking country, its academic environment is of French origin, dubbling has been a legal requirement for broadcasting foreign films on TV since the 1962 and, in recent years, dubbled versions of films and games are becoming increasingly more popular .

32. http://geektrooper.wordpress.com/2013/09/13/os-hue-hue-hue-br-uma-praga-

The impossibility of maintaining their rituals of politeness due to the technical mediation and the requirement to communicate in a language in which they are not fluent makes online interaction a challenge for Brazilian gamers. Technical disturbances, infra-structure problems and geographic distances complicate it even further by increasing the lag and levels of latency, impairing the performance of Brazilian players. The records encountered in game forums suggest that it is not unusual that Brazilian players are accused of being unskilled due to conditions that are not of their choice.

> *My question is what is their ******* problem? They are on average way worse at dota than north americans. and not just bad, they are bad and play like they don't give a **** if they win or lose and play like total retards (...) there is 0 reason for these ******** to pick english when they can't speak it well.* (*fdghg*, 1st May, 2014[33])

> *Not due to their attitudes I'm fine with those, but their 250+-300+ ping is annoying. Sometimes you will flash away from them and their stuff will still hit you etc due to latency discrepency [sic].*
> *(...)*
> *If you played another online game with 220 ping, you would be banned.*
> (Tamed, 11 February 2011[34])

As a consequence, from their point of view, the HUEHUEs understand that they are being made to suffer and are unwelcome because of who they are. In a word, they are being griefed, and their response is to (counter) grief by creating another game of their own, one in which they can (must) speak Portuguese and the objectives are such that their high latency is irrelevant.

4.2 Family and Foreigners

As described by the sociologist Roberto Da Matta (1985), the paradoxes of daily life in Brazil are similar to those encountered by Brazilian players in MOGs.

Due to circumstances beyond the scope of this text, the Brazilian State apparatus was designed with the intention to create a specific type of society, rather than to respond to the existing social organization. The impersonal logic of a (supposedly) egalitarian State was imposed on a culture in which the most valuable bonds were those of personal relationships, generating a tension that has not yet been resolved. In Da Matta's interpretation, Brazilians have found a way of dealing with the need to live under an institutional logic that does not match their cultural values by transforming impersonal situations into more familiar events. This often results in requests for exceptions: such as when Brazilian gamers require their high levels of lag and latency to be forgiven, independently of the harm they can have caused to the team.

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virtual/

33. http://www.playdota.com/forums/showthread.php?t=1418008&highlight=americans

34. http://forums.na.leagueoflegends.com/board/showthread.php?t=507196

The association between family and protection is an important key to understand the gregarious behaviour of the HUEHUEs and the facility with which they unite against players from other countries. In anonymous and global online environments, nationality becomes an obvious point of interpersonal convergence. Being 'BR' is sufficient to create a bond between players – and sufficient reason for them to unite against the 'non-BRs'. This explains the speed and agility of coordination of the HUEHUEs' attacks: there is no need for previous arrangements, the HUEHUEs act together because they are Brazilians. The problem is how easily this pre-eminence of nationality translates into nationalism.

It would be naïve to think that Brazilians' confrontations with foreigners started on the internet, or that it is a recently developed trait. The idea that people in Brazil are especially receptive to foreigners is part of an artificial image of the country as a 'friendly multicultural tropical paradise' that has been under construction for centuries. According to Simai and Baenninger (2011), this image includes a "quasi-xenophile" attitude that is, in fact, a myth, in the Barthian sense of an ideological discourse that erases its own existence by making its content appear natural, evident and even inevitable (Barthes, 1991). The authors defend that the success of the "myth of receptivity" of Brazilians can be measured by the strength of the denial of xenophobic feelings and beliefs in Brazil. Their argument would be tautological if the myth itself was not the primary tautology: when asked about their relation to foreigners, Brazilians respond with the narratives of 'soft slavery', positive miscegenation, associations between the tropics and the exotic and the erotic and the agreeable nature of the 'cordial man', that are all part of the construction of the myth. Brazilians interviewed by Simai and Baenninger (2011) and Rezende (2011) repeatedly affirm their receptiveness to foreigners and rejected any suggestion of racism or xenophobia on their part by repositioning Brazilians as the victims, never the perpetrators of aggressions. The pattern is the same that is encountered when the HUEHUEs claim the right to act aggressively because the US. players attacked them first.

> *My profile does NOT denote any uncommon characteristic related to a stereotype. I try to follow online games etiquette, but this does NOT oblige me to remain passive in a situation that I consider unfair.* (Survey Respondent #246)

5 Carnivalesque Huehueing

In principle, everyone in an online game is supposed to be equal and the same rules apply to all. However, when playing in servers located in the U.S., the conditions encountered by U.S. gamers are not the same of those encountered by players from other countries. Low ping and the primacy of communicating in their native language are preeminent examples. From the perspective of players outside of the U.S., the theoretical equality is not a principle of justice, but of disempowerment. It is possible than, from the point of view of the HUEHUEs, the U.S. players appear to be aggressive by demanding that

they circumvent their linguistic, geographical and technological restrictions in the name of 'equality'. Under this interpretation the U.S. players trolled, the gullible HUEHUE took the bait and engaged in a passionate and aggressive counter-attack.

Assuming the position of victim is not a novel way to justify one's own xenophobic discourses. In Brazil as anywhere else, this well-known rhetorical strategy consists in swapping the places of the subject and the object of the aggression, inverting the argument. There are accounts that U.S. players have insulted gamers from Brazil (and other countries) for circumstances beyond their control. However, there are also records of the HUEHUEs attacking first and claiming the position of victim later (in the classic sequence 'gibe moni plox' followed by 'thas raciss, I report u').

Other ways used by the HUEHUEs to justify their aggression include hiding xenophobia under a cover of gaiety and jolliness. This conveniently converges with the idealized happiness that is part of the idealized image of Brazil and with the type of anonymity encountered in MOGs, where every HUEHUE could be any other HUEHUE and individual identities are protected by the collective identity. The game becomes a masquerade and huehueing a form of carnival – a cultural manifestation that is also conveniently part of the Brazilian stereotype.

The organized and unified Brazilian Carnival presented by the mass media is increasingly distant from its origins, but huehueing can be thought of as a variation of Brazilian street carnival (Da Matta, 1978) and as carnival in the Bakhtnian sense, that is, an event in which familiarity amongst strangers and eccentricities are the norm, excesses are allowed and power relations are inverted (Bakhtin, 1984). As carnival, huehueing is an opportunity for the HUEHUEs, who see themselves as a minority, to invert the forces and troll the mainstream group. The "jolly relativity" of the situation has been established from the trademark of the HUEHUEs - the meme of laughter - and the most basic form of huehueing - spamming a channel with that laughter. The relativity of carnival is amplified by the multicultural nature of online interactions, which broadens the ambiguity between what is playful and what is pernicious (Stivale, 1997). The carnivalesque tone and the use of nationality as identity marker are the most outstanding differences between huehueing and other types of disruptive behaviour in MOGs or on the internet in general.

In their peculiar masquerade, the HUEHUEs take control of the stigma placed upon them and mock themselves in order to make fun of the other players. Not only their memes, but also images and videos that ridicule them are created and distributed by them. With this attitude, the HUEHUEs refuse the sanctioned ways of the Feast of Fools, in which those of lower ranking impersonate the authorities, and the carnivalesque inversion is turned inside out: the HUEHUEs don't dress up as kings, but as jesters, and by doing so raise doubts about where the power effective lies.

6 Final Remarks

In this article, I discussed whether there are differences between the aggressive behaviour of Brazilian players in MOGs and actions from other groups, in online environments. I also tried to verify how Brazilian players deal with the association between their actions and their national identity. To this end, I recalled some episodes of online hostilities between Brazilians and non-Brazilians in SNSs and games, introduced the HUEHUEs and huehueing. References to huehueing collected with an online survey and from secondary sources were used to illustrate the comparisons of the behaviour of the HUEHUEs with descriptions of spamming, trolling and griefing in previous literature.

Huehueing combines these three types of actions, with the main differences between Brazilians and other spammers, trolls and griefers being their preference for group action; the ostentatious use of nationality as their identity marker and the creation of a peculiar carnivalesque setting in which they grant themselves, by means of humour, the right to perform a disturbingly two-folded inversion of power relations.

Huehueing was discussed in this text as a symptom of the complexity of the interplay between national identities, geopolitics and technological mediation in online multicultural interactions. The intention was neither to describe Brazilian culture based on the subculture of the HUEHUEs, nor to imply that huehueing is a typical behaviour of all Brazilian gamers. On the contrary: the sociological theories about Brazilian culture and the relation between Brazilians and foreigners were considered interpretative keys to understand the specific phenomenon under scrutiny. However, the strong convergences between these sociological theories and the behaviour of the HUEHUEs, as well as the popularity of the memes and their increasing appearance in other online environments, suggest that huehueing is representative of Brazilian culture and could be taken as a case for further studies aiming for generalization.

The traces of the confrontations between gamers from the U.S. and players from other countries suggest that studying online interactions with Brazilians can lead to a better understanding of international online interactions in general.

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EMERGING ETHICAL CONSIDERATIONS FROM THE PERSPECTIVES OF THE ELDERLY

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Keywords: *elderly, assistive technology, privacy, autonomy, adaptability*

Abstract: *The introduction of assistive technology for elderly no longer able to live independently has brought along a set of new ethical issues that deserves attention. Previous studies on similar topics mostly focus on certain groups of elderly or specific ethical issues rather than addressing ethical issues that apply to the majority of elderly regardless of their background. This paper reports from four methods of data gathering where we let elderly using assistive technology voice their own ethical considerations without having to speak within an ethical framework or only limited to one or few ethical issues. The data is gathered through four different methods at a local care home in Oslo over a period of 15 months. Rooted in a thematic analysis we present four identified problem areas, and we summarize and discuss our findings with regards to how we believe these issues should be dealt with in the future.*

1 Introduction

Through the increased focus on the rapidly expanding elderly population, an increasing number of elderly in Oslo are being introduced to assistive technology (AT). Introduction of AT brings forward ethical issues that must be taken into consideration, and in the midst of this discussion, it is important not to forget the elderly who have to live with this AT. As stated by the Directorate of Health (2012), *"welfare technology is not about technology, but about people"*. Our motivation is to bring attention to the ethical aspects from the perspective of the elderly, giving them a voice and chance to speak openly and freely from their own perspective.

Previous studies have addressed ethical challenges associated with the introduction of AT from various perspectives. However, most of this research aims at addressing ethical issues from a given starting point, i.e. with selected ethical issues in mind or with a predefined ethical lens or framework. At length, this narrows down the discussion of ethical challenges to a focused set of issues, which may not cover all the challenges in their entirety. It may also limit or prevent the elderly from bringing their own perspectives into the discussion. While these related studies provide us with great insight and address important issues, we still miss research focusing the broader ethical considerations that emerge when introducing AT. As we are witnessing AT being rolled out in heavy numbers in Norway, we argue that some attention should also be devoted to the ethical considerations that can reach beyond those issues only relevant for one or a few limited groups of users, e.g. elderly suffering from cognitive impairments.

Rather than approaching with a predefined ethical framework, we allowed the elderly and their caregivers to define issues they considered ethical.

We have extracted data targeting ethical issues from four different methods carried out at a local caring home in Oslo throughout the last 15 months. The goal of this paper is to shed light on some of the general ethical issues that emerged from the perspectives of the elderly living with AT, as well as discussing how we might handle them. Through a thematic analysis, we have elicited four problem areas, namely lack of information, privacy and safety, intrusion, and decision- making. We use these problem areas in our discussion of why we encourage *patience, adaptability* and *openness* with AT as a way of dealing with these issues.

1.1 Related work

An obvious underlying issue is the tension between privacy on one hand and safety on the other; how far can you stretch the breach of privacy using the argument of increased safety or security? The ongoing debates are mostly concerned with finding the optimal balance between safety and security, both from the views of the elderly and other involved actors, e.g. the home care service. As the Directorate of Health (2012) points out, ethical challenges and privacy issues with welfare technology are especially prominent when used where the technology is most needed, i.e. among the weakest of the elderly. We see clear traces of this in that most of the conducted research on ethical challenges with welfare technology links this to elderly suffering from cognitive impairment, e.g. (Batchelor, Bobrowicz, Mackenzie, & Milne, 2012; Kang et al., 2010; Lauriks et al., 2010; Martin, Bengtsson, & Dröes, 2010; Meiland, Dröes, Sävenstedt, Bergvall-Kåreborn, & Andersson, 2010; Rosenberg, Kottorp, & Nygård, 2012). All these researchers address the ethical issues that arise when dealing with cognitive deficiency, albeit from different standpoints and ethical perspectives, e.g. privacy, trust, intimacy, intrusion and autonomy. Their discussions mainly revolve around unveiling ethical aspects with AT, and include fruitful arguments on what constitutes as a correct balance between privacy and care, and the acceptable or non-acceptable violations of privacy. In addition to these studies, we also find studies dealing with ethical issues among elderly, although with slightly different perspectives, e.g. a generational perspective (Birkland, 2010), a sensor technology based perspective (Ding, Cooper, Pasquina, & Fici-Pasquina, 2011), future perceptions perspective (Harrefors, Axelsson, & Sävenstedt, 2010), medicalnperspective (Ziefle, Rocker, & Holzinger, 2011), and the significant other perspective (Rosenberg et al., 2012).

Adaptability from an ethical point of view is an important part of the discussion in several previous studies. Birkland (2010) points out that research on older adults and ICT has mainly been based on age as the sampling criteria, rather than using the effect technology has on the individual as a basis. In their view, this has resulted in a *"conceptual, design and sampling gap"* (ibid). Martin et al. (2010) refer to previous studies focusing on a principle- based approach rather than a theoretical approach, in which individual autonomy stands as one of the key principles. Findings from Frennert, Forsberg, and Östlund (2013) indicate that AT should recognize individual parameters, while Rosenberg et al. (2012) also highlight a need to let technology adapt on an individual level in order to gracefully integrate with previous habits. In their study of tele-

care-in-use, Mort, Roberts, Pols, Domenech, and Moser (2013) also argue that customizability and adaptability are main components in an ethical practice of telecare. Findings from Harrefors et al. (2010) also support that elderly who believe they are able to make their own decision also trust themselves and their own judgmental ability. This indicates that elderly comfortable with making decision should not be deprived of this autonomy. Similarly, Rosenberg et al. (2012) mention how oversimplified technology may end up with an opposite effect if it automates and replaces physical and cognitive capabilities that are still intact, e.g. the ability to remember numbers. Their results also suggest that some elderly feel a strong motivation towards using assistive technology precisely because it allows their brain to get regular exercise.

There are also studies on more overall topics such as policies, practice and future implications of introducing AT. Martin et al. (2010) bring in paternalism to discuss whether or not it is justifiable to make decisions on behalf of the citizens, either because they are unable to make decisions for themselves, e.g. due to cognitive deficiency, or because the government believes they know what is best for the citizens. Coeckelbergh (2010) present studies on the ethical implications of replacing human care with artificial intelligence, as well as various ways of understanding and approaching care. Finally, there has been some discussion of assistive technologies using robots and the ethical consideration of a society in which current caregiving tasks are either supported by robots or completely carried out by robots (Coeckelbergh, 2010; Sharkey & Sharkey, 2012; Sparrow & Sparrow, 2006). They all provide interesting perspectives on future ethical challenges.

2 Methodology

2.1 Ethical perspective

Different researchers have applied different ethical perspectives in their studies of AT. There are examples of researchers, e.g. within dementia care, turning towards consequentialist theory (Martin et al., 2010). Another widely applied approach is to rely on deontological theory and use ethical values based on basic human rights as seen in (Coupland, Wakunuma, & Stahl, 2009; Martin et al., 2010; Sharkey & Sharkey, 2012), e.g. the European Convention on Human Rights. In our research, we choose to rely on this second deontological approach, where we consider ethical issues from the users' experience with regards to human rights rather than from an action-based or principle-based approach. Working with technology aiming to add value to the life and well-being of the elderly users, our ultimate goal with an ethical consideration is to address all issues that may prevent technology from contributing to the good of the user. This includes the impact and relevance of the technology, the expectations of the elderly, and the benefits and implications the technology has on the immediate surroundings (Coupland et al., 2009).

2.2 Research setting

Our empirical context is a local care home in Oslo administrated by Oslo Municipality, which is designed to include welfare technology as a part of the basic package delivered to all residents. The care home consists of 87 apartments, and the current average age is 83 years old. Through our collaboration with Oslo Municipality we have an arena at the care home where we can learn about elderly interacting with technology, as well as experiment with new technologies. All results presented in this paper were gathered at this local care home.

Our pool of participants is very close to equally distributed between the two genders, although there is a slight majority of women. All participants have had an active working life up until their retirement, although they have no clear similarities in their background. Some have partly relevant backgrounds which helps them relate to the discussion, e.g. nurses or engineers, although our previous studies have never demonstrated any significant difference in opinion due to prior professions. All participants have children, and all have been married at some point. However, due to their advanced age which spans from 74 to 98 years, most of them now live in widowhood. With a few exceptions, all apartments are built for single elderly, and rather than staying in a home which was once shared with children or former spouse, they now live in a new home tailored for their individual living. Most of the elderly are able to function relatively independently, although some residents require daily visits from the local home care unit as there is a variation amongst the participants considering their health situation. Common for all is that they are considered too healthy to move into a nursing home and that they have been cognitively cleared by the municipality office within the last year. However, some struggle with limited motor skills and rely on walkers or electric wheelchairs, while others suffer from dyspnea, e.g. chronic obstructive pulmonary disease. Due to their varying needs, different AT help them with their daily activities. Some use AT to help keep track of their medical history, while other rely on AT in order to stay safe.

Common for most residents is that they use AT to stay in touch with the outside world, e.g. long-distance relatives or friends outside the local care home. We have made strong efforts in order to ensure that our selection of participants includes all types of participants.

2.3 Studied technologies

In general, assistive technology (AT) is widely used to describe a set of technologies designed to help people with disabilities. The term is not tied to an age-specific group or to certain disabilities, and is often substituted with a more specific and contextually appropriate term, e.g. adaptive technology, rehabilitative technology or welfare technology. However, in the case of our empirical context, we have studied a set of technologies, ranging from commercially available assistive equipment to adaptive devices specifically designed for our particular context. The local care home is equipped with a wide range of devices and sensors, e.g. automated light-sensors, RFID-based door locks into private homes, motion sensors in living room and bedrooms, and prein-

stalled tablet devices in all apartments. Therefore, we use the umbrella term AT throughout the paper to emphasize how our results and findings are rooted in more than one type of technology. However, during our presentation of the data gathering, we refer to two particular studies, namely the task-based group evaluation of a tablet device and the usability testing of a future telecare system. The different technologies involved in these two particular studies are further explained in this section.

All residents at the local care home have been equipped with an 11-inch tablet with custom software tailored for their context. The municipality refers to this tablet as welfare technology, and the tablet assists them with their daily tasks, e.g. ordering food from the in- house cantina or providing overviews of internal and external events. It also includes social features that allow the elderly to make phone calls, have video conversations, use the Internet, and listen to the radio. The tablet can also serve as a hub for attachable health-monitoring equipment, e.g. pulse oximeter, blood glucose meter or medical thermometer, although these features are not yet made available at the local care home. The tablet is also used by the staff at the local care home to communicate with the residents. In a Nordic context, no similar acquisition has ever before been made by any municipal or governmental unit. As a result, there are no systems immediately available for comparison. While each individual technology may be compared to similar studies, we believe it is the ethical issues emerging from this combination of interacting technologies that is of interest. It also provides us with a highly unique empirical context and allows us to discuss ethical matters with residents, staff and external caretakers through the same piece of AT.

The second study we refer to during our data gathering, is our usability study of a future telecare system. This usability study is a part of an ongoing collaborative change experiment and includes the district home care unit, the staff at the local care home, and elderly residents who are dependent on daily visits. A set of tasks traditionally given through home visits, are now being delivered through the television. The elderly participants use their own televisions with a provided wide-screen camera to receive home care services, e.g. medical dosages, follow-up conversations and food instructions, at pre-scheduled times without having to rely on unscheduled home visit.

In contrast to these two studies focusing on a particular piece of technology, the open- ended inquiry methods, e.g. the group interview with the daytime staff, did not revolve around one specific implementation. Instead, the interviewees were told to discuss freely and voice their concerns independent of existing technological implementations, and consequently, these methods yielded ethical issues related to cases or examples that were not necessarily present at the local care home.

2.4 Data gathering

The study of already existing AT at the local care home provides perspectives on existing ethical issues. However, our ongoing experimentation with new and alternative AT involves elderly participants as evaluators, experts and co-designers, and allows us to capture their opinions regarding future AT as

well. We believe providing the elderly with an opportunity to voice ethical matters through evaluation of existing AT, as well as during the design of currently non-existing AT, strengthens the discussion. Certain ethical issues are directly rooted in the development process and the developers' underlying ethical views. By discovering ethical issues during the development process, improvement can be made to the development process which in turn may contribute to avoiding unfortunate side effects once deployed (Coupland et al., 2009).

The empirical data used in this study was gathered over a period of 15 months through four different methods as shown in Table 1. These methods are a part of a larger set of data gatherings during our ongoing long-term work in collaboration with Oslo Municipality. These four methods are based on four different approaches to data gathering, although they all allowed the participants to discuss issues they perceived as ethical. Our goal was not to give them a definition of ethical issues or present our own opinions on what constitutes as an ethical issue, but rather allow them to use their own experience and their own perspective as a starting point.

Table 1: Overview of methods

#	*Method*	*N*	*Collected data*	*Inquiry method*
A	**Task-based group evaluation**	21	Photographs, field notes, problem grading	Categorical labeling and grading
B	**Group interview with daytime staff**	5	Audio recording of interview, field notes	Open-ended questions
C	**Usability testing of a future telecare system**	8	Photographs, field notes, usability grading	Post-interview and observation
D	**Questionnaire on use of welfare technology**	51	Results from questionnaire	Employee summary

The task-based group evaluation was conducted on the tablet device distributed to all residents of the local care home. The evaluation included a total of six sessions, three sessions with groups of elderly, two sessions with groups of employees, and one session with a group of HCI-experts. In each session, the participants were taken through steps of representative tasks and were given time to discuss each step in each task. They identified and graded the severity of each issue individually before engaging in a plenary discussion. Finally, all identified issues were labeled from a predefined set of categories, out of which one was labeled as "ethical". What issues that constituted as ethical were individually determined. In this method, we only presented the tasks, and we did not partake in the discussion or express any personal opinions; however, our presence allowed us to capture tension or disagreements that arose during the discussions. Altogether, this involved 21 participants, namely 11 elderly, 7 employees and 4 HCI-experts. We draw our results from all six sessions, as they all either elicited user problems regarding ethical issues or expressed privacy concerns during discussions.

The *group interview* was held with the five key employees at the care home, namely the daytime staff. They all interact with the elderly on a daily basis and serve as a first-line support for all issues the elderly encounter, including those of a technical nature. The employees were given a demonstration of the system by a representative from the vendor, and were then engaged in an open un-

structured group interview where they could elaborate on topics brought up during the demonstration, as well as other issues. This was done early after the introduction of AT in this care home, and the goal of the discussion was to collect and summarize issues reported so far. The open-ended questions allowed the employees to direct the discussion based on the feedback from the elderly, as well as issues they deemed important from their own perspective.

The *usability testing of a future telecare system* was conducted as a part of a collaborative change experiment where a two-way usability study was applied to capture the inter-dependency between the elderly and the homecare nurses. This involved making parallel observations on both sides of the interaction simultaneously. This data gathering presented the elderly with modifications to existing solutions and they were asked to grade certain aspects of the interaction, e.g. quality and experience of the service. In addition, they were engaged in an informal post-interview where they were asked to comment on the service's challenges and potential for medical and social care. We only asked for their opinions on general issues, and they themselves chose what elements to include. 8 elderly participants contributed to our study, and we also had one home care nurse assist us in the study.

The *questionnaire* was created by the administrative leader of the care home in collaboration with the employees. The answers were collected by going from door to door rather than using an electronic survey. The intention behind the questionnaire was to capture the experience and opinions on the residents regarding the use of all AT after one year of residency. The questionnaire mainly included closed-ended questions about their experience so far, e.g. use, training and knowledge, although it did allow the elderly to comment freely on each question. This yielded many interesting perspectives on issues that were not directly covered through the questionnaire, e.g. ethical aspects. The employees who collected the data processed and summarized the qualitative data from the questionnaire. Out of the 74 people who reside at the local care home, 51 elderly agreed to answer.

3 Results

The four methods presented in Table 1 yielded different types of data, ranging from structured severity-graded usability issues to informal comments captured during observations. Common for all the extracted data was that it included issues that elderly in one way or another perceived as ethical issues. Not surprisingly, the openness of our approach, i.e. not providing the elderly with any definitions, guidelines or frameworks, generated a highly unstructured data set from various sources. In order to organize our results, we analyzed the data thematically and then categorized our identified issues into four problem areas.

3.1 Data

The task-based group evaluation generated a list of 39 unique issues with the existing technology. Issues not labeled as ethical were discarded and we also cross-examined their identified issues with our observational data in order to correct for potential mistakes. All these issues were included in the analysis as related issues. However, some issues mainly labeled as something other than ethical, still generated discussions indicating it also being an ethical concern. Despite not being tagged as an ethical issue by the users themselves, we still found these apparent non-ethical issues to represent unforeseen ethical side effects of the introduction of AT, and as a result we chose to include these issues as partly related. The group interview was mainly captured through audio recordings and field notes. This generated a transcribed interview that in combination with our observational data was coded. The usability study of a future telecare system generated a list of 16 task-related usability issues, out of which none covered ethical issues. It also generated 14 non-task related issues where most of the issues were of an ethical nature. The post-interview after the usability testing revealed additional ethical issues. In the case of the questionnaire, the data from the 51 participants yielded a quantitative dataset with a summary of the comments from the elderly. We only kept the results from questions with unambiguously response; elements of uncertainty, i.e. questions with ambivalent answers, were not included. Data from this questionnaire was only used to support or contradict results from the three other methods, thereby serving as secondary data for primary data grounded in qualitatively verified results.

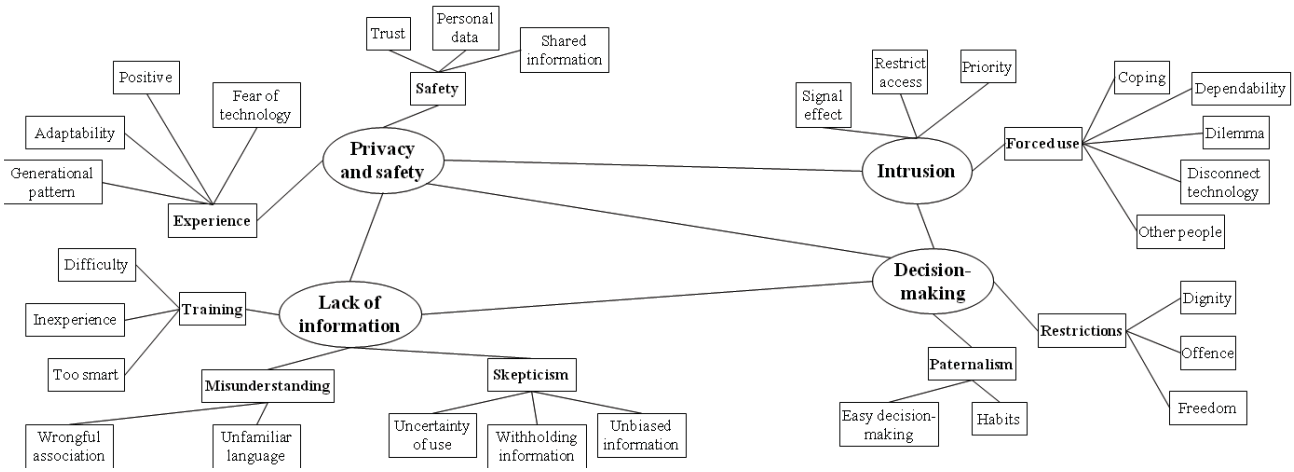
3.2 Analysis

We addressed the openness of our approach by applying a thematic analysis, and we followed the guidelines presented in (Braun & Clarke, 2006). Our data was not rooted in any predefined focus area, nor was it scoped down. As a result, we chose an inductive approach to the analysis. This provided us with the necessary freedom and flexibility to categorize the data. While it would be interesting to study the underlying views shaping the ethical standpoints of the participants, we did not consider our data material appropriate for a latent theme analysis; without a defined focus area or any in-depth data gatherings on particular ethical issues, we chose to limit the analysis to a semantic level.

Following the recommendations of Braun & Clarke (2006), we did not use quantifiable measures in order to determine our themes, nor did we require a minimum prevalence. Instead, we looked for the reported issues that the elderly themselves had labeled as ethical. The data from method [A] and [C] was already labeled, and all labeled feedbacks were gathered and filtered before the issues were clustered solely based on this labeling. The data from method [B] and [D] was coded and later added to the appropriate clusters. Since we wanted the meanings to emerge from the data, we chose an open coding rather than axial or selective coding. We did not look for any underlying ideas as one would expect from a thematic analysis at the latent level, but instead

focused on grouping the responses mainly to summarize the issues. As recommended by (ibid), we progressed from this descriptive grouping of issues to an interpretative theorizing of their broader meaning. As Figure 1 shows, four top-level themes hereafter referred to as four problem areas, emerged from this theorizing. All issues were categorized under the four problem areas, and they were labeled with the methods that brought forward the particular issue. The presentation of our findings revolves around these four problem areas.

Figure 1: Thematic analysis of the data



4 Findings

Table 2 gives an overview of the four problem areas elicited through the thematic analysis, as well as the main findings, from which of the four methods the data was gathered, and finally key observations or quotes.

Table 2: Overview of problem areas and findings

Problem area	*Main findings*	*Source method*	*Key observations or quotes*
Lack of information	Do not understand own privacy concerns due to technological inexperience	[A], [C], [D]	Certain words (e.g. camera, sensor, monitoring) are associated with surveillance
	Have not been given enough training	[B], [D]	The language used is unfamiliar and confuse or misinform them
	Feel unwelcome to use	[A], [C]	*"The technology is too smart for me"*
	They believed the system may withhold important information	[B], [C]	*"Does the system know about the fire alarm before I hear it"*
Privacy and safety	Fear of certain aspects prevents use of the whole system	[A], [D]	Elderly taping over cameras with black tape
	Safety overrules privacy	[A], [C]	Safety and trust issues are perceived as more important than privacy issues
	Desire to turn off the system at a given time	[B], [C]	*"I want to turn off the device at night in the same way I turn off my cell phone"*
	Feel safer with the technology once they master it	[B], [D]	50 out of 51 respondents in [D] expressed increased safety due to technology

Table continues on next page.

Intrusion	Fear of surveillance of personal information	[A], [B]	Many feel forced to choose between having contact with distant relatives and storing personal information in the tablet
	Lack the option to block outside calls or contact when no relatives	[A]	Miss option to disconnect the technology from the outside world
	Afraid of people not wanting to visit due to cameras in apartment	[A], [B]	*"Do I need to have a surveillance sign in outside my door"*
Decision-making	Does not facilitate for easy decision making	[A], [B], [C]	Often certain options are withheld from elderly who want those settings available
	Do not like it when other decide for them	[B], [D]	*"I was told that I have to have this option, even though I did not want it and will not use it"*
	Prevented from using old familiar technology	[A], [C]	The elderly are not given an option to choose devices themselves, and several people with familiar devices are unable to use them

4.1 Lack of information

As some of the elderly more familiar with technology explained, the majority of the residents at the local care home were unaware of the consequences of using the technology due to their inexperience. They were mainly presented with the positive aspects of technology, and many elderly desired unbiased presentations that allowed them to consider their own privacy preferences with full information. Several elderly claimed that more training would increase their knowledge of technology, including security and privacy. We observed some confusion about privacy concerns based on either misinformation or wrongful understanding of technology. Firstly, some elderly wrongfully believed the AT to collect and store more information than it actually did, e.g. what data the sensors recorded, and secondly, there were some wrongful understandings about the difference between monitoring-on-demand and surveillance.

The AT in the care home was pre-installed for the elderly as a part of the basis delivery to all residents. While their intentions were to introduce the technology early in order to give the elderly time to adapt, this also deprived the elderly the opportunity to assess their own privacy concerns before using the AT. Since all systems were also set to one universal predefined setting, there were no guarantees of each resident being truly informed. For many elderly who were new to technology, discovering personal privacy preferences took time and they did not feel mature enough to make important decisions regarding privacy. We also saw cases of elderly having very clear opinions about sharing personal information or monitoring of activity, without being able to articulate their views from a technological standpoint.

4.2 Privacy and safety

For most of our participants, privacy concerns were not among the issues that directed the decision on whether to adapt new technology. Rather, safety and trust issues drove the decision; privacy was not regarded as a noteworthy concern. For most of the elderly, it was not a matter of being observed or not, rather who the observer was. They regarded monitoring as something positive

and safety enhancing. In most cases, they perceive the monitoring devices as something friendly rather than scary. If a worried daughter was watching over her old father's movement outside when it was cold and slippery, they understood that as care rather than surveillance. There were also cases where the necessity of the device claimed superiority over privacy concerns. Several of our participants had passed 90 years and safety issues were so prominent that they overshadowed ethical aspects. When introduced with

alarm mechanisms or alert systems, the elderly began to ask questions about who sat in the other end to respond to the alarm. Firstly, they needed confirmation that all alarms would be immediately answered, but secondly, and more importantly, they needed to know that the person responding was a trustworthy person. We have found trust to be such a strong factor in the decision making of the elderly, and we see clear signs of elderly regarding trust and safety as much more important than privacy concerns.

While the abovementioned case reflected the view of the majority, our results also indicates contradicting views and preferences, namely from those who were able to articulate their own privacy concerns. One of the participants who expressed a concern regarding breach of privacy claimed that the elderly as a generation were unable to understand privacy violations, and therefore had no particular opinion on the matter. Lack of system control was the one common issue among those who expressed concerns regarding privacy violation; it did not allow them to use the AT as they desired. Firstly, lack of control prevented them from having any explicit way to turn off the system, something many preferred to do at nighttime. Secondly, the two ATs tested in [A] and [C] from Table 1 did not allow the users to regulate individual aspects of the system. Both solutions included a camera, and several elderly did not want to use the camera, which they perceived as obtrusive. As there were no options labeled "disable camera" in either of the systems, they felt that they had no control over when the camera was turned on. However, this was not only a concern for the non-users of the camera feature; it was also an evident concern among some of those who did use it. One participant explained how he after use would cover his camera lens with black tape to "turn it off". We hold their argument as valid; when engaging in a real-time video dialogue, e.g. with the home care service, the elderly can no longer control which information is being shared and not.

4.3 Intrusion

Besides issues concerning matters of privacy when using the system, there were also issues reported on forced use, i.e. not having an option to withstand from using the technology. This was experienced as an intrusion as several elderly reported that they felt the technology forced itself upon them, even into their own homes. The elderly expressed concerns with the inability to isolate themselves from undesired technology. It was preinstalled in their homes, and some of the technology could not be physically removed, e.g. the sensors and the wall- mounted chargers. In addition, several services at the local care home were built around the technology, thereby forcing the elderly to cope with the technology. The elderly who felt forced to use the technology said that they had

no option to "disconnect" from the technology. Several elderly also mentioned that they were forced to accept undesirable circumstances during their involuntary use, and that they were forced not only to use the technology, but also to accept privacy violations they felt uncomfortable with.

Firstly, some elderly did not have any close relatives from whom they expected to receive calls. As a result, they did not want their assistive technology to be accessible for anyone outside. They expressed a desire to use the technology to help them with their daily activities without exposing their presence to the outside world. As the system depended on remote services, it was not possible to restrict connections only to local facilities. Since the whole residency was built around this system, it became difficult for them, for some even impossible, to refrain from using the AT. They felt compelled to use it on terms to which they did not agree.

Secondly, several elderly strongly disliked that the system gathered information about them, e.g. their whereabouts and their activities, even when they specifically did not want the system to do so. However, they were very aware of the fact that if they chose not to share their private information, they would not be able to use the system for communication purposes, most notably calling and video conferencing with their distant family. In the previous case of elderly having a positive outlook on privacy concerns, it did not matter that the elderly chose to prioritize trust and safety over privacy, because there were no contradictory or conflicting circumstances. In this case, the elderly had obvious privacy concerns, and suddenly it became a forced dilemma. Common for this case was that the need for privacy was overshadowed by the need for communication; consequently, most of the participants reported that they held the need for communication of such a high importance, that they would accept their privacy being violated. This exemplifies how elderly using AT often cope with privacy concerns because these important concerns are overruled by other, even more important, considerations; and when forced to choose between "our way or the highway", they silently accept.

A final observation is that elderly might have an opinion on privacy issues rooted in other factors than a sense of personal violation. One elderly woman asked us whether she needed to put up a surveillance sign outside of her door; she worried that her neighbors would stop visiting because of the sign.

4.4 Decision-making

Several elderly desired more freedom than what the system currently allowed. They felt competent enough to make decisions, although expressed concerns with the system not allowing them to do so; this made them feel restricted regarding both freedom and challenge. Several elderly had previous experiences with technology as regular users rather than as marginalized elderly users.

There were also cases of elderly reporting offensive built-in limitations. One of the elderly even described the system as downgraded to a restricted level of access similar to childproofed systems. For many elderly, being active was central in retaining their voice in society. While the elderly often refrained from using equipment that openly signaled fragility or dependability, we ex-

perienced the AT to discourage use on a personal level. The elderly residing in the care home are very aware of their own capabilities, and some felt insulted when the AT assumes them to be either cognitively weaker or less familiar with technology then they actually were. For systems that rely on one or few levels of user capability, the threshold is usually set very low, thereby ignoring those who want to use the system like regular users.

5 Discussion

The elderly participating in our research reported a vast amount of issues on privacy. However, they all seemed to have very different perspectives on what constituted as a violation, and how severe they deemed it. Issues characterized as a severe problem by some was not mentioned at all by others. Rather than looking at privacy in the traditional definition, i.e. a *"state in which one is not observed or disturbed by others"* (Zwijsen, Niemeijer, & Hertogh, 2011), we will look at privacy as something more nuanced in our discussion; something not objectively measured, but instead something unique and personal to each user. Our findings indicate that rather than being bound to the technology or rather than being tied to the cognitive or medical condition of the user, the privacy issues are bound to the context in which they are used. Instead of guaranteeing that the state is keeping a secret or out of reach of others, we should instead aim for an *"appropriate flow of personal information"* (Nissenbaum, 2009). With this understanding of privacy in context in mind, we use our empirical findings and related work to discuss why we believe considering *adaptability*, *patience* and *openness* might help us tackle some of the current ethical challenges with AT.

5.1 Encouraging patience

As our findings show, it took a while for the elderly to identify and articulate their own needs concerning privacy. Having lived at the local care home for less than a year, they still needed time to adapt to their new everyday life. In our understanding of privacy issues being tied to the context, we see why they needed time to discover these needs. Through our 15 months of fieldwork, we have witnessed many elderly slowly recognizing and finding the ability to articulate their needs own needs from a contextual perspective. Gramstad, Storli, and Hamran (2013) describe a similar process from their own research as a "prolonged and subtle" process. We also see elderly approaching AT very carefully and hesitantly as they try to find the appropriate balance between the technology and their own vulnerabilities. Luckily, we experienced early adapters having a positive effect on the more hesitant users as it gave them a sense of relief that their peers adapted so easily. Besides this, we also need to maintain patience in order to prevent rushing or forcing the technology on the elderly. In a rushed situation, caregivers or other involved parts may be the ones "un-silencing" and articulating the needs on behalf of the elderly (Gramstad et al., 2013). While this is often perceived as positive as it gives a voice to unaddressed needs, the caregivers might not be able to interpret the needs

correctly, and their proxy voice might not articulate the needs entirely. This may eventually disturb this appropriate flow needed to ensure that personal information is handled correctly. Other elderly felt that the pre-installed technology was being forced on them before they were ready. This resulted in them refusing to use the AT, and we have seen examples of elderly stowing away AT in cupboards and drawers. A final reason for encouraging patience, as well as adaptability, is that as time goes by, new ethical considerations emerge. Over time, the gradually declining cognitive and somatic abilities of the elderly will eventually bring forward new circumstances that might influence their privacy preferences, or alter their ability to express or even have such preferences. Acute short-time care include different ethical considerations than long-term care; the former focuses on medical treatment and healing, while the latter face challenges related to deterioration rather than cure (Van der Dam, Abma, Kardol, & Widdershoven, 2012).

5.2 Encouraging adaptability

In our empirical context, most elderly are expected to live with AT for at least a decade. We consider adaptability to be an extremely important factor in guaranteeing that ethical concerns are continuously protected throughout the period, where needs and preferences is expected to change over the coming years. As the people and the technology change, the context in which privacy issues are assessed also changes. Elderly who might seem satisfied with the technology today, might not feel the same once the surrounding circumstances changes. Regardless of the perspective and focus, common for all related work presented in this paper is that they all support our idea of adaptability as a necessity in well-designed AT.

However, most of them bring in adaptability in order to adjust to declining somatic, cognitive or medical conditions, and they do not discuss the personal ethical preferences of the elderly. We encourage adaptability in order to ensure that elderly can use AT depending on their own preferences, rooted in the context of use.

Our findings suggest that the privacy issues do not lie in the observation itself, but rather in who the observer is. The questions should not be of a binary kind, e.g. whether they are observed or not, but instead more nuanced, e.g. when it is acceptable to be observed or who the observer is. Most elderly felt comfortable with being observed in some scenarios, e.g. with safety alarms, even though that involved monitoring. In fact, observing itself might be perceived as something positive in some cases, like in the case with the safety alarms or as exemplified through the literature (Essén, 2008; Zwijsen et al., 2011). Similarly, the question of whether one is disturbed or not is decided on a subjective level in a given context, and we need to recognize individual thresholds of what constitutes as privacy. In order to do so, it requires us to shape technology in such a way that it can adapt to personal and circumstantial preferences. When privacy is implemented as something reacting to individually-bound contextual preferences, we may create new use scenarios that would otherwise constitute as privacy violations. This will also allow those who are truly dependent of technology to use it in a way that would otherwise consti-

tute as a privacy violation, e.g. by allowing family members to monitor outdoor activities. Correspondingly, literature also claims that for some elderly, safety aspect may claim superiority over any ethical dilemmas, e.g. privacy concerns or restriction of integrity (Rosenberg et al., 2012; Zwijsen et al., 2011).

Bringing in contextual integrity also allows us to understand why some elderly reported an imminent danger of non-adaptable AT not meeting them on the level of autonomy best suited from both an ethical and medical perspective. Some reported the AT as very complicated, while others claimed it to be oversimplified and insulting. Common for these participants was that they missed working with a system that was suited for them, namely their cognitive and bodily capabilities. Even though they did not mentioned it explicitly themselves, their concerns are similar to those of Rosenberg et al. (2012), who discuss the potential negative effects of oversimplified technology, where stigmatization is a possible consequence of directing, limiting or forcing decisions. This also became an autonomy issue, as the elderly felt they were not given enough freedom and challenges to keep functioning as active and independent citizens. As many of the elderly stated, they were used to getting daily brain exercise from the systems they were used to, and they had to bring in their own equipment, e.g. a laptop, because the assistive technology was too oversimplified for them. Also from the perspective of paternalism discussed by Martin et al. (2010) and Harrefors et al. (2010), AT should aim not to make decisions on behalf of fully competent elderly.

5.3 Encouraging openness

Honesty and righteousness are both fundamental principles, as is keeping a promise. This implies that we avoid giving illusions about how AT inevitably will make their life better. Several elderly mentioned not being able to make informed, un-coerced, decision by themselves due to limited and one-sided information. Others said they felt that decisions and regulations that affected their lives were being partly hided from them. This was an important part of maintaining independence and influencing their lives. We encourage openness to help elderly understand AT not from the moment it is presented to them as users, but instead from when the decision to acquire AT is being made. Allowing them to partake in the decision, or at least being informed about it, may create forces of mutual learning where the openness help those accountable of the technology to understand from the perspective of the elderly.

As we experienced, some of the elderly being directly confronted with questions about ethics had very clear opinions on e.g. privacy or safety, similar to the research of Ziefle et al. (2011), although they had no channel to speak through. In one case, an elderly woman claimed that privacy needs assess on her behalf, i.e. who should have access to her personal information, were not to her preferences; it was just closest to her preferences. As pointed out by Zwijsen et al. (2011), the most preferred option for the elderly is not necessarily the ethically correct choice, it might just be the least bad option; sometimes the privacy context brings forth a willingness to sacrifice privacy for safety. And that was also the case with woman who wanted her to share information with her family because she believed it increased safety. However, the main ar-

gument for encouraging openness should still be the opportunity to influence your own life; as Eek and Wressle (2011) mention, maintaining dignity and integrity are of uttermost important to the elderly. Wright (2011) points out that to maintain dignity, the elderly must be given the opportunity to directly influence the policies that eventually affect their lives.

Many elderly also express concerns about ending their days in a dystopia where human contact was replaced by sensors and systems. As providers of technology, we also have a responsibility to be open about potential privacy and trust issues that may arise along with the new technology in the future. While not removing human contact, they might still find themselves in situations where their autonomy or privacy is being compromised or violated, e.g. shift of agency from the elderly to sensor data over which the elderly possess no control over or are not necessarily aware of (Mort et al., 2013). Similarly, information about ourselves that we currently do not regard as private or sensitive could suddenly become so the moment it is combined with other seemingly innocent information about us. As more and more information about us is gathered, the imminent danger of compiling all this information also increases.

6 Conclusion

There are still many general ethical challenges remaining with AT, and as the development of technology moves on, new ethical issues are likely to emerge. We experience that while the elderly might misunderstand aspects of the technology, and thereby believe it to be more in violation than it actually is, the resulting feeling of violations is still real; they experience it in the same way as if they were correct in their claims. We encourage a continuous focus on ethical challenges when introducing AT, because the moment we lose focus on the ethical aspect of AT, we might just experience how close it is from a state of delight to a state of harm.

In this paper, we have reported from a study where we gave the elderly a chance to express ethical concern from their own perspectives, and thereby brought attention to some of the challenges currently experienced with AT. We have based our findings on data from four different methods being thematically interpreted and analyzed. Rooted in our empirical data, we have discussed four problem areas concerning some of the ethical consideration with AT, and we have discussed how we believe these should be handled. By encouraging patience, adaptability and openness around AT, we believe that the technology will be better suited to tackle some of the ethical challenges presented in this paper.

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NEWSPAPER COVERAGE OF FACEBOOK ACROSS THREE ENGLISH-SPEAKING COUNTRIES

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Keywords: *social networks, Facebook, news*

Abstract: *This research project analyzes the newspaper coverage of Facebook in three English-speaking countries (the United States, the United Kingdom and Australia) in order to compare the hopes and fears attached to the stories told about social networking sites. Articles from the New York Times, the London Times and the Sydney Morning Herald with Facebook in their title were systematically coded and compared. It was found that company news and vague references to Facebook as a marker of importance occurred most frequently. Coverage in the United States was most likely to cover company news and privacy issues, and least likely to cover online crimes. Australian stories were most likely to cover issues of social interaction and political participation related to Facebook. Overall, newspaper coverage of Facebook was more negative than positive.*

1 Theoretical Background

1.1 Discourse about Technology

The public discourse surrounding new media often heralds their arrival with narratives about how society will be either saved or ruined by the affordances of the technological advancements (Lister et. al., 2009). As Marvin (1988) argues, the introduction of a new medium frequently provides an opportunity for existing social tensions to be revisited and renegotiated. For example, some anecdotal narratives about Facebook view it as isolating individuals from one another while other narratives argue that social media enable the return of a viable social sphere and the decentralization of information production (Lister et. al., 2009). Thus, examining the newspaper stories that have been told about Facebook might reveal modern tensions about the role of the individual in society.

Two competing understandings of the relationship between humans and technology have shaped the study of media. First, McLuhan's (1967) ideas that the medium itself has more far-reaching effects on viewers than the media message content gained popular attention in the early 1970s. McLuhan argues that the prevailing technology of an age shapes the way humans think and interact, a perspective referred to as "technological determinism." In contrast, Williams argues that technologies are defined through human invention and use, thus emphasizing the ways media are shaped and used within specific cultural contexts (Lister et. al., 2009). While Williams' view has been more influential in shaping the study of media technology in subsequent years, McLuhan's ideas have experienced a resurgence in discourse surrounding new media (Lister et. al., 2009).

The cultural comparison in this study aims to explore the degree to which one social media platform (Facebook) is discussed differently in three different cultures. Williams' theoretical perspective would lead us to expect that different attributes would be emphasized in each country. However, McLuhan's ideas about the determining nature of technology might suggest that public discourse would be the same across the three cultures.[1]

The concept of "public" as it refers to public discourse has been variously defined and measured. Habermas (2000) conceptualized the idea of "public" as being "open to all" in a broad sense that contrasts such spaces and discourse with "private" domains. Habermas himself articulated the difficulties in defining "public" and subsequent critics have pointed to the ways that the public sphere as defined by Habermas was restricted by gender, class and race. Indeed, some discourse about internet technology in general and social networks in particular has focused on the ways in which online environments may make traditional social markers less salient or even invisible.

At the same time, the age of the internet has made the idea of a singular "public" discourse even more problematic. If we think of public discourse as narratives circulated in venues with varying degrees of public access, it is apparent that the internet has enhanced the ability of narratives to cross geo-political divides and made the sources of such narratives more difficult to identify.

This study focuses attention on a narrowly-defined type of public discourse: newspaper coverage. This type of media discourse is shaped by the institutional conventions of news production, a relationship between news producers and economic, political and cultural institutions, and the sources used by reporters to construct news narratives, including scientific and academic discourse as well as the voices of individual community members. We return to each of these influences in section 1.3, but first we outline some prevalent narrative themes in academic discourse about social media as a starting place for our analysis.

1.2 Academic Discourse about Social Media

While the Facebook narratives told by news media have not been analyzed by previous studies, we know that researchers have concentrated on certain themes when studying Facebook (and social media in general). This section briefly summarizes some of these research trends in order to later analyze the relationships between academic and news discourse about social media. These academic narratives also provided a starting point for the researchers' understanding in the present study as they began to identify narrative themes in the analyzed newspapers.

A good deal of work has been done on the construction of identity on Facebook. Researchers have found differences in the way users choose pro-

1. There is also the question of whether the three chosen countries (chosen in part because they are heavy users of Facebook and in part because English is the primary language in each country) are culturally different enough for us to observe variation in coverage. All three countries score similarly on Hofstede's (2001) cultural dimensions scale, for example. It is possible that this project could be extended through international collaboration with scholars at the CaTaC conference who might complete the analysis in their own countries, which may be more culturally distinct.

file images according to gender and age (e.g. Siibak, 2009; Strano, 2008). They have also shown that even though versions of self displayed online highlight positive aspects, they remain somewhat true to reality (e.g. Ellison et. al., 2006; Siibak, 2009; Strano, 2008; Yurchisin et. al., 2005). Researchers point out that the online environment provides new ways of communicating identity and thus may necessitate new theories for understanding impression management online (e.g. Hogan, 2010; Reese et. al., 2007; Zarghooni, 2007). Finally, the negotiated nature of identity on Facebook has been explored by looking at the interaction effect between user posts about themselves and the things others say about them in wall posts or comments (Hong et. al. 21012) and by investigating untagging and deletion practices (Strano and Queen, 2012) as well as other ways that online identity performances are continuously negotiated (Cover, 2012).

Another prominent research focus has been privacy in online environments (e.g., Krasnova and Veltri, 2010; Krasnova et. al., 2009; Utz and Kramer, 2009). Utz and Kramer (2009) show that the majority of users on Hyves and StudiVZ (89%) consciously manage their online audience by making their privacy settings more restrictive than the default site settings. In addition, Krasnova et. al. (2009) show that the amount and type of content posted is impacted by concerns over social threats (such as bullying and stalking) and organizational threats (such as the collection and use of personal information by marketers). Privacy concerns may lead users to only post content which they would be comfortable having their least intimate Facebook friends see, thus appealing to the "lowest common denominator" (Hogan, 2010).

Some research has focused on how people interact with others on social networks. For example, boyd (2007) investigates how teens engage in "networked publics" that help them form a social identity. In addition, Ellison et. al. (2007) show that Facebook use builds various forms of social capital amongst college students. Mazer et. al. (2007) argue that Facebook provides a platform for students and teachers to build relationships that benefit the classroom learning environment. Finally, recent research has focused on the impact of Facebook use on romantic relationship formation and maintenance (e.g. Fox et. al., 2013; Tong, 2013; Stern et.al., 2007).

The role of Facebook in coordinating and inspiring political activism has also been studied (e.g. Valenzuela et.al., 2012; Ndlovu & Mbenga, 2013; Bosch, 2013). In addition, the use of Facebook in elections, especially to reach young voters, has been investigated (Vitak et. al., 2009; Aparaschivei, 2011).

Finally, business scholars have studied the nature of "social commerce," or business transactions that take place through social media. For example, see a special issue in the *International Journal of Electronic Commerce* dedicated to establishing a research framework for studying social commerce (Liang & Turban, 2011-12).

1.3 Media Discourse about Social Media

As researchers, our starting point for thinking about what is important about social media starts with the academic discourse we have consumed and to which we have contributed. However, non-academics usually learn about ac-

ademic research regarding technology through the filter of media norms and practices. For example, Marshall McLuhan's flashy personality and pithy sound bites ("the medium is the message") made him a media favorite in the 1960s. In contrast, Raymond Williams' more reserved nature and measured articulations of theory made him less likely to be covered in the media, although he was respected in academic circles.

What is considered "newsworthy" at any given time is influenced by various cultural factors. One factor is the way news institutions are constituted within a given culture. For example Priest & Ten Eyck (2003) argued that the press in the United States faces a greater expectation of "objectivity" than the press in some European countries where certain papers are more likely to be aligned with certain political positions. The relationship between the press and the government also varies between countries, with the press charged with a "watchdog" role in some places, while it plays a more explicit promotional role for the government in other places. In most cases, however, the press relies on governmental support for information and, thus, must maintain some sort of working relationship (Priest & Ten Eyck, 2003).

In addition, the perception of newsworthiness changes over time. For example, Clark and Illman (2006) showed that the amount of coverage of different types of science and technology has varied over time in the Science Times section of the *New York Times*. The framing of which aspects of a technology are newsworthy may also shift over time. For example, Entwistle et. al. (2000) demonstrated that the U.K. coverage of Norplant shifted over time from a frame heralding the benefits of the new technology to a frame warning of the possible dangers of its use (a frame shift they argued is typical of new health technologies).

The connection between news coverage and the views of citizens or community members is difficult to trace. "Public opinion," even when conceptualized as a simple aggregate of individual opinions, is difficult to measure and is usually thought to be influenced by a myriad of cultural and personal factors. However, a long tradition of agenda-setting research originating with McCombs & Shaw (1972) suggests that the media have at least some potential to influence collective and individual perceptions of issue importance and, in some instances, their opinions (see Bryant and Oliver, 2009 for an extended review of some of this research).

Media coverage has also been used as a marker of cultural discourse and public opinion. Since journalists work within economic systems requiring them to solicit subscriptions and/or advertising, they try to appeal to existing reader interests, beliefs and attitudes. However, while media coverage may reflect some prominent public opinions, the complex nature of news norms and production caution us to treat it as a partial indicator at best of public discourse.

This study measured two aspects of media coverage in order to explore how such coverage might differ over time and across cultures. First, we looked at Narrative Theme which we defined as the frame used by the article to draw attention to certain aspects of Facebook use. Second, we measured Story Valence which we defined as the overall positive or negative perspective towards Facebook displayed in the article. Based on the literature reviewed above, we

postulated that there would be at least some differences in the news coverage of Facebook across time and cultures.

- H1: The narrative theme of stories about Facebook will differ over time.
- H2: The narrative theme of stories about Facebook will differ across cultures.
- H3: The valence of stories about Facebook will vary over time.
- H4: The valence of stories about Facebook will vary across cultures.

Ultimately, the study analyzed two theoretical questions about Facebook coverage:

- RQ1: Do the narrative themes of newspaper coverage about Facebook differ from the narrative themes observed in academic discourse?
- RQ2: What do any observed differences and similarities in Facebook coverage across cultures suggest about the ways in which Facebook may shape culture and/or culture may shape Facebook?

2 Methods

2.1 Sample

Lexis Nexis Academic was used to randomly choose 100 newspaper articles from each of three newspapers: the *New York Times*, the *London Times* and the *Sydney Morning Herald*. All articles were retrieved on December 11, 2013 by searching for articles with "Facebook" in the headline to that date. For each newspaper, a systematic sample was chosen by establishing a random starting point and selecting every "*k*th" article for the sample, where *k (the sampling interval)* = the total number of articles with Facebook in the headline divided by the desired sample size of 100.

The *New York Times* database included blog posts, while the other two databases did not, so the blogs were removed from the sampling frame. This resulted in a total of 492 articles in the *New York Times* with the keyword "Facebook" in the headline. The resulting 100-article sample included articles ranging in date from October 16, 2005 to November 18, 2013. The *London Times* sampling frame included 926 articles. The resulting sample included articles ranging in date from February 24, 2006 to December 11, 2013. The *Sydney Morning Herald* sampling frame included 193 articles. The sample included articles ranging in date from August 20, 2007 to December 2, 2013.

2.2 Coding Process

The two researchers involved in this study began by reading over the articles in the sample and identifying narrative themes that could be coded. We recognized that at that point in the process our perceptions were heavily influenced by the categories we recognized from the academic literature and tried to purposefully look for new themes. We met and discussed our ideas and developed our first coding strategy. We then each coded the same 20 percent of the sample (60 articles, 20 from each newspaper). Intercoder reliability was calculated and found to be unacceptable. We then discussed and revised the coding strategy and coded a different 20 percent of the sample. We repeated this process until we achieved acceptable intercoder reliability. One of the researchers then proceeded to code the rest of the sample.

We decided to code each article according to the Narrative Theme depicted in the headline and lead paragraphs of the article. Although we tried coding secondary themes in one of our coding strategies, we found that most articles really only dealt with one theme, so we were not gaining much knowledge from the additional coding. We settled on a ten-theme coding schema that is described in detail in the next section. For intercoder reliability we achieved a 78.3% agreement and a Cohen's kappa of .74 for this final coding scheme.

In addition to theme, we coded each article according to Story Valence. We began with a five-category coding scheme that included: (1) the article is not really focused on Facebook (see Narrative Theme category below) (2) the article is neutral about Facebook, it does not portray any valence (3) the article is balanced about Facebook, saying both negative and positive things, (4) the article is positive about Facebook and (5) the article is negative about Facebook. We found that the journalistic norm of trying to be "objective" meant that many articles had brief statements of opposing views, even though the article as a whole portrayed a negative or positive valence. Perhaps because of this, we had difficulty achieving an acceptable intercoder reliability score with this scheme. In the end we settled on a simple scale that forced articles into "mostly negative" or "mostly positive" categories (with articles that were not focused on Facebook excluded). With this coding scheme we achieved an 83.3 % agreement and .73 kappa for intercoder reliability.

2.3 Coding Categories

Each article was given a unique number and the newspaper, date and word count were coded. The Story Valence was coded as either positive, negative or as not addressing Facebook directly (see first category of narrative themes below). The main narrative theme of each article was coded based on the frame provided in the headline and lead paragraph(s). The following categories were used:

- **Vague Reference to FB in Title, but focus of article is not Facebook itself**
  For example, this category included articles about current and past employees doing other newsworthy things, Facebook being used as a vague adjective to describe another social event or articles about the Facebook movie.

- **Other**
  This category included all stories that are clearly about Facebook (so do not belong in category #1) but do not fit in the categories defined below.
- **Social Interaction Themes**
  This category included stories that have to do with Facebook causing people to either connect better or worse with one another. Included were stories about the definition of friendship, finding or maintaining romantic relationships, Facebook causing breakups, grieving on Facebook, and people leaving Facebook because it interfered with their offline life.
- **Political Action/Public Discourse Themes**
  These stories were about Facebook helping people organize political action, share news, engage in public discourse and solicit votes in elections.
- **Authoritative Surveillance Themes (control)**
  This category included stories about how Facebook is used by people in power to check up on others, such as it being used by authorities to catch criminals, by parents to monitor children, by the government to monitor citizens, and by researchers to conduct research.
- **Online Crimes/Misconduct**
  These stories were about harassment, hate speech, cyberbullying, porn or offensive sexual content, scams, identity theft, false accounts and disclosure of privileged/classified information.
- **FB Interaction Leading to offline Crime/Misconduct**
  These stories focused on how Facebook is used to organize offline crime, how arguments online escalate to offline violence and the solicitation of sex online.
- **Privacy/Information Ownership Themes**
  This category included stories that are about a variety of privacy issues on Facebook: privacy controls are difficult to use, Facebook mining personal information for advertising, Facebook privacy policy changes, Facebook claims to information and users suppressing information by limiting access.
- **FB Company News**
  These stories focused on the actions of Facebook as a company. The category includes news about the Facebook IPO, statistics about Facebook use and profit, Facebook expansion (Vine, Instagram), new Facebook features and apps, and new business strategies.
- **Business/Commercial Use**
  These stories were about how businesses use Facebook for marketing or public relations.

3 Results

3.1 Narrative Theme

Figure 1 reports the overall frequency of articles within each Narrative Theme. The most frequent Narrative Theme is company news, followed by vague references to Facebook in headlines for articles that do not focus on Facebook itself. The least frequent theme was reports of offline crime or misconduct instigated by Facebook interactions.

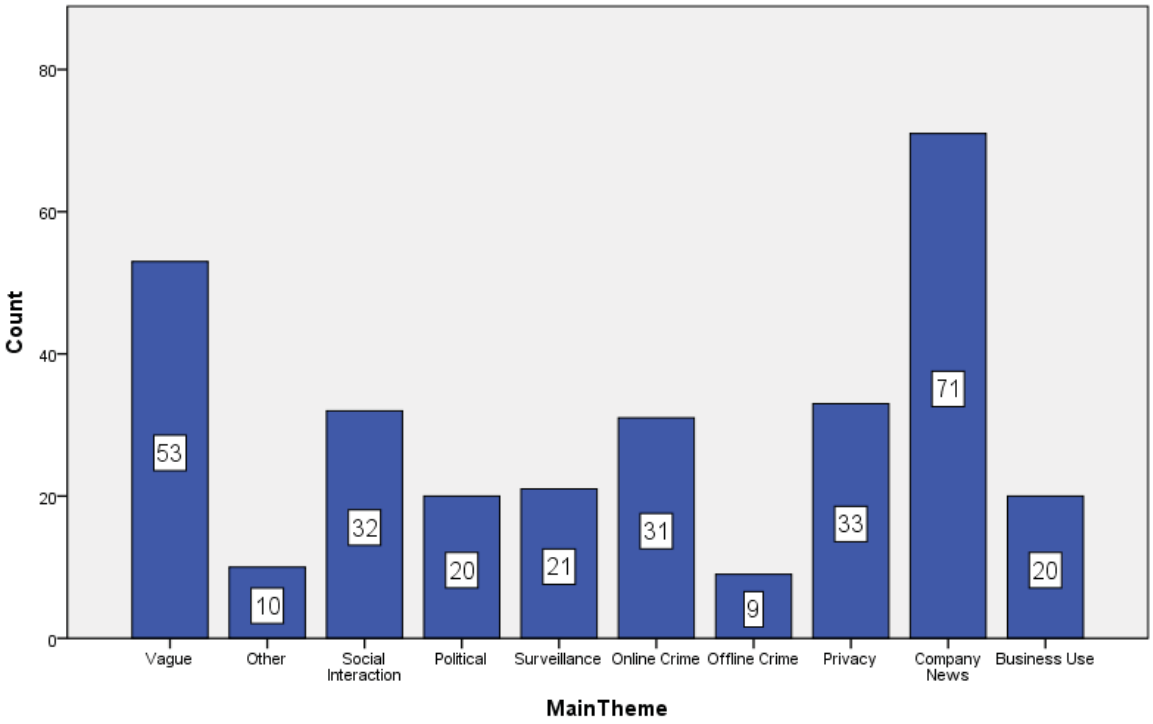

Figure 1. Narrative Themes Frequency.

In order to test H1 and H2, which hypothesized that Narrative Theme would differ over time and across cultures, we ran a crosstabs analysis resulting in Chi Square or Fisher's Exact statistics depending on the expected cell counts. The Monte Carlo exact method was used when necessary because of the sample size as compared to the number of categories of analysis.

For the analysis, article dates were converted to years only. There was no significant difference in Narrative Theme over time (p=.438, Fischer's Exact calculated with the Monte Carlo method). Thus, H1 is not supported.

There was a significant difference in Narrative Theme by newspaper (*p*=.004, Fischer's Exact calculated with the Monte Carlo method). Thus, H2 was supported. Table 1 reports the frequency of each theme by newspaper (since the sample is 100 for each newspaper, the frequencies also represent the

percentage of stories in each newspaper under each theme) and Figure 2 shows this information visually.

Table 1. Narrative Theme by Newspaper.

	New York Times	*London Times*	*Sydney Morning Herald*
Vague	19	21	13
Other	1	6	3
Social Interaction	8	6	18
Political	5	5	10
Surveillance	5	8	8
Online Crime	4	12	15
Offline Crime	1	5	3
Privacy	17	8	8
Company News	33	22	16
Business Use	7	7	6

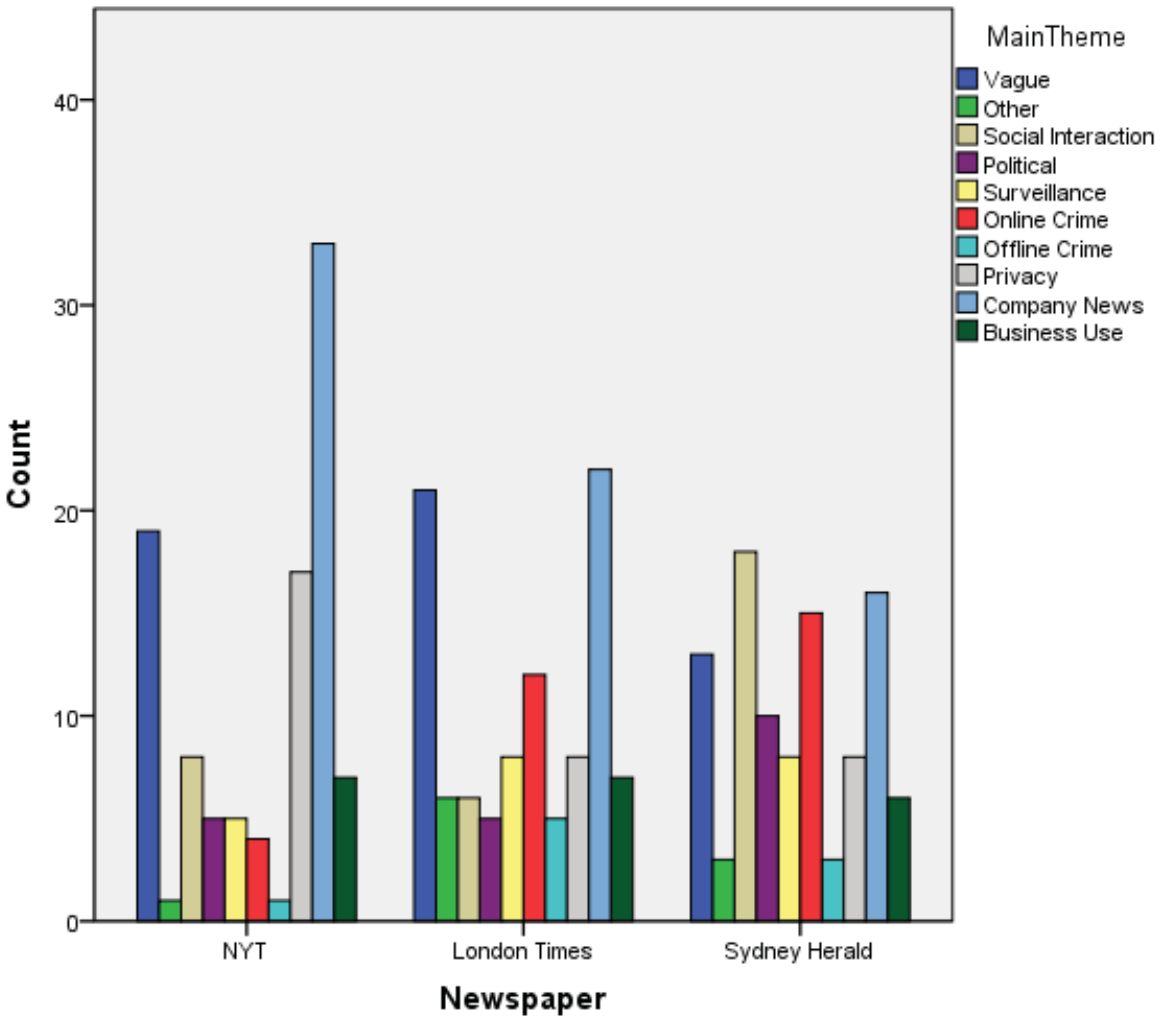

Figure 2. Narrative Theme by Newspaper.

3.2 Story Valence

H3 and H4, which hypothesized that Story Valence would differ over time and across cultures, were tested using the same crosstabs analysis described for H1 and H2.

Of the 247 articles in which Facebook was the main narrative (excluding the articles that only made vague reference to Facebook in the title), 160 articles used a negative frame of Facebook activities or use, while 87 used a positive frame. There is no significant difference in Story Valence over time, (p=.067, Fischer's Exact calculated with the Monte Carlo method). There is also no significant difference in Story Valence across newspapers, $\chi^2(2, N = 247) = 2.69$, p =.261. Thus H3 and H4 are not supported.

Table 2. Story Valence by Newspaper.

	Negative	Positive
NYT	51	30
London Times	47	32
Sydney Herald	62	25
Total	160	87

Some of the Narrative Themes we identified seemed clearly negative or positive. It is hard to imagine a story about Facebook leading to offline crime as being positive, for instance. However, other categories, such as the role of Facebook in political activity could be used in either a positive or negative way. Therefore, in order to check our perceptions of the Narrative Themes we coded and to explore the valence of flexible themes, we looked at the relationship between Story Valence and Narrative Theme and found a significant relationship (p=.000, Fischer's Exact calculated with the Monte Carlo method). Table 3 shows the percentage of positive and negative frames for each main narrative theme.

Table 3. Story Valence by Theme.

	Negative	Positive
Other	20%	80%
Social Interaction	72%	28%
Political	35%	65%
Surveillance	81%	19%
Online Crime	90%	10%
Offline Crime	100%	0%
Privacy	94%	6%
Company News	51%	49%
Business Use	35%	65%
Total	65%	35%

4 Discussion/Conclusion

4.1 Analysis of Observed Differences

There is no significant difference in Narrative Theme or Story Valence over time, indicating that the stories journalists tell about Facebook have remained

somewhat consistent over time. This is surprising since previous research has shown that narratives often change as a technology is adopted into society (Enwistle et. al., 2000). One possibility is that our measurement instrument is not specific enough to capture the types of subtle changes that could be observed.

An interesting trend in the data is that the second most frequently observed category was vague references to Facebook in the headlines of articles, although the articles themselves were not focused on Facebook. Some of these articles were related to Facebook's IPO (Initial Public Offering), but focused on the actions of the brokerage firms Morgan Stanley and Goldman Sachs or the fines incurred by NASDAQ. A few articles were about the 2010 movie, *The Social Network*. Although these articles were closely related to Facebook, they did not really comment on Facebook itself.

More interesting, however, are the articles that refer to Facebook as a means for establishing newsworthiness and importance. For example, many articles used Facebook as a comparison for other products and companies such as Google and My Space and LinkedIn (which the *London Times* called the "Facebook for suits"). This suggests that Facebook is seen as the comparison marker for online businesses.

In addition, an association with Facebook makes a person newsworthy when they act in other parts of their life, as indicated in the headlines below:

- "A Facebook Founder Renounces His United States Citizenship" (NYT)
- "A Facebook Founder Begins a Social Network on Charities" (NYT)
- "Facebook Boss Calls on Women to Update Status" (LT on Sheryl Sandberg's book about women in the workplace.)
- The Bride and her Beaming Billionaire: Zuckerberg Updates His Marital Status Day After Facebook Sale (LT)

Finally, some stories simply use Facebook as an adjective to represent a way of approaching the world or displaying information. For example, an article in the *New York Times* entitled "The Facebook of Wall Street's Future" contains short profiles of important people in business and finance. Similarly, an article in the *Sydney Morning Herald* entitled "Haunting Facebook of NSW Women Killers Comes to Life" shows profiles of female murderers. In both of these cases "Facebook" seems to refer to a way of representing identity through minimal words and photographs. This use gets stretched in a *London Times* article, "Simons travels the world to bring Dior into the Facebook age," which covers the use of a large-projection slide show at a fashion show in lieu of live models.

Other articles use "Facebook" to represent a contemporary period of time. For example the *London Times* describes singer Laura Marling as "Joni Mitchell for the Facebook Generation" and claims that "In the Facebook Era, the Scrapbook has a Place." These references suggest that Facebook has come to represent the attitudes and habits that accompany a society permeated by digital data and user-generated content.

The type of story most often told about Facebook is about the company itself, how it conducts business, whether it is successful, and what strategies it

is planning. Not surprisingly, the *New York Times* was particularly heavy in its coverage of this U.S.-based business, with 33% of the stories analyzed falling into this category. However, company news was also in the top two types of stories in the U.K. (22%) and Australia (16%). The valence of articles about company news was evenly split between praise (49%) and criticism (51%) for Facebook business actions. It is surprising that journalists tell more stories about the business strategies and economic impact of Facebook than some of the more social and political impacts of Facebook. However, perhaps journalists assume that these are dimensions that readers are least likely to know about without their news coverage.

A second way in which the U.S. coverage is different from the U.K. and Australia is there are more stories about privacy (17% versus 8% in the other two countries). In contrast to company news, the privacy theme is overwhelmingly negative (94%) about Facebook's policies. Perhaps the U.S. focus on privacy reflects a stronger cultural expectation that companies be held responsible for protecting privacy. Or, it may reflect a culture in which public pressure is often one of the strongest measures of restricting company power.

The U.K. and Australia have a much heavier focus on both online and offline crimes associated with Facebook. The difference is particularly apparent with online crime, where the U.K. and Australia have three times more coverage of this issue. (LT=12%, SMH=15%, NYT=4%). This suggests differences in perceptions of risk and perhaps in perceptions of the importance to educate readers about the risks of online crime. Another possibility is that online crime is more prevalent in some countries than others, or that it is prosecuted more successfully. From the context of some of the stories it also seems that online crimes may be defined differently in the three countries.

Australia was the most likely of the three countries to report on Facebook's impact on social interaction (18% vs. NYT=8% and LT=6%) and political issues (10% vs. 5% for each of the other two). Stories about social interaction are more likely to be negative about the way that Facebook affects human relationships (72%), but political stories are somewhat more positive about the ability of Facebook to contribute to political engagement and participation (65%). No clear explanation occurs to the researchers of why Australian coverage would be more likely to cover these issues, which are also heavily emphasized in the research literature.

The coverage of Facebook technology in these three countries illuminates both affordances and dangers associated with the use of this technology, but the higher percentage of negative coverage suggests a resistance to the type of technopoly that Postman (1992) predicts. Still, the heavy coverage of company news and the high number of vague uses of "Facebook" as a marker of importance (which are not included in the Story Valence analysis) seem to support an argument that social media technology has been granted influence over other social and cultural systems. The cultural differences observed in this study also seem to support Postman's claim that the United States may be further entrenched as a technopoly than other countries.

Another consideration should be the perceptions that non-American cultures might have of the U.S.-based company. It would be interesting to look at the extent to which Facebook is seen as a symbol of American culture. If it is,

the non-U.S. coverage may reflect a reaction to American culture as much as it reflects a reaction to the technology. Future research might explore how cultural perceptions of a technology's place of origin might interact with news framing.

A more complete understanding of the narratives being told about social media would need to include more countries and news articles written in languages other than English. In addition, it would be preferable to include several different newspapers from each country studied in order to account for the peculiarities of specific publications. Stories should probably be coded by natives of the country in which they are published since the researchers found that the differences in news norms of even these three countries made it sometimes difficult for us to decipher the intention of articles in the *London Times* and *Sydney Morning Herald*. Finally, the coverage of more countries may reveal additional narratives not present in the three countries studied.

4.2 News Coverage compared to Academic Narratives

One of the broad research questions we wanted to address was whether the narrative themes of newspaper coverage about Facebook differed from the narrative themes observed in academic discourse. In section 1.2, we identified five different themes of academic discourse about social media: (1) identity formation and maintenance, (2) privacy concerns, (3) social interaction, (4) political impact and (5) business implications. Of these five themes, four were also observed in the newspaper coverage in this study. The one exception was the narrative theme about identity formation and maintenance. Since this is such an area of emphasis for researchers, we expected there to be some articles that discussed how people construct profile pages in order to promote certain images. Perhaps the process of self-presentation seems intuitive or non-problematic to non-academics (and thus not newsworthy). This perspective is in keeping with Cover's (2012) description of identity formation based on Judith Butler's work:

> *That is, identity formation occurs 'in accord' with culturally-given discourses, structures and practices which, once stablised for the subject, comes to feel as common-sense, and by which any actions, performances or behaviours of the subject appear to be acts emanating from that identity rather than constituting it.* (p. 179)

Without media coverage of the identity issues associated with social media, everyday Facebook users may be unaware of how the technology enables and constrains the identities they perform. However, research about user perceptions does not necessarily support a conclusion of their ignorance. It is unclear from this study why media discourse has not taken up the issue of identity formation and maintenance as well as what effect the absence of such coverage may have.

Newspaper discourse seems to emphasize a relationship between Facebook and crime to a greater extent than academic discourse. This might be explained by a closer connection between law enforcement agencies and news institutions than generally exists between academia and law enforcement.

News agencies usually have a routine procedure that involves scanning police logs for newsworthy items. Crime also has an inherent news value because of its connection to novelty and conflict.

The comparisons we can make in this study are constrained by the fact that we did not do a comparable systematic content analysis of academic discourse about Facebook. Our educated review of the academic literature may have missed existing narratives being told by academics. Future research might take up such a project, however, the current research seems to point to much overlap between the two discourses and we wonder if the observed differences are compelling enough to warrant further study.

4.3 Technology and Cultural Influence

Finally, we return to the question of what the observed differences and similarities in Facebook coverage across cultures suggest about the ways in which Facebook may shape culture and/or culture may shape Facebook. This is, of course, too broad of a question for this small study to truly answer, but thinking about the results within this framework may contribute to the way we continue to ask questions about the interaction between culture and technology.

Much of the newspaper discourse about social networking technology is consistent across cultures. No themes were absent in any culture and the coding scheme we constructed included very few stories in the "other" category. This suggests a view of technology consistent with McLuhan's idea that the nature of a technology itself encourages certain frames of understanding. However, these similarities could also be explained by an overlap in news practices across cultures, or even the influence the news coverage in one country might have on the coverage in another.

Although themes overlap, there are different emphases in each culture. This suggests a view of technology consistent with Williams' idea that technology is shaped and defined within the existing understandings of a culture. Still, the observed differences are small and the consistency of story valence across cultures again suggests that there may be more similarity than meaningful difference in interpretation.

Not surprisingly, this research supports an integration of McLuhan and Williams' ideas, which is typical of much recent research about internet technology. We need to work towards more nuanced theories about the relationship between technology and culture that acknowledge influence in both directions. In addition, this study supports a view that institutional norms and practices may be important influences in the way a culture talks about technology.

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"NOT THE REAL THING": YOUNG PEOPLE'S EXPERIENCES OF GETTING CIVIC AND POLITICAL NEWS THROUGH SOCIAL MEDIA

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Keywords: *Youth, social media, political participation, citizenship norms*

Abstract: *Western democracies have seen a decreased participation in elections, as well as in other activities traditionally associated with political participation. One of the aspects of participating politically is to keep updated in what happens in society, for example by following the news. In both areas youth have been found to be considerably less active than older generations.*
The decline in young people's consumption of news media does not necessarily mean that they are disinterested in news or politics, but they may get their information from other sources, for example social media. Using a qualitative multi-method approach, this paper aims to take a closer look at how 26 Swedish young people look at social media as a way to get informed in civic and political matters, and how they actually use it.
For the participants, social media is one, very important source to get to know what happens in society – it is often where they first hear about news, and it is the media they use most. However, they are ambivalent to it – they appreciate the immediateness of it, but they are also troubled about its perceived shortcomings and risks. In the analysis, the participants' ambivalence is connected to changing norms of citizenship where their practices reflect a new type of actualizing citizenship, while their norms still reflect much of the conventional norms of a dutiful citizenship.

1 Introduction

Most Western democracies have seen a decreased participation in elections, as well as in other activities traditionally associated with political participation, conventional politics and government (Bennett, 2008a; Bennett, Wells, & Rank, 2009; Dalton, 2008; Furlong & Cartmel, 2007; Norris, 2004; Putnam, 2000). Even if the decreased interest goes for various groups in society, young people are frequently pointed out as the most problematic group (Barry, 2005; Biesta, Lawy, & Kelly, 2009; Coleman, 2006, 2010; Harris, Wyn, & Younes, 2010; Smith, Lister, Middleton, & Cox, 2005). One of the aspects of participating politically is to keep updated in what happens in society, for example by following the news. Here, too, youth have been found to be considerably less active than older generations (Kohut, 2013). In his book on young people's relation to news and politics, Buckingham (2000) refers to studies from several countries that show that young people are less interested in news (particularly political news) and less well-informed than their counterparts in earlier decades. The decreased interest for news journalism is seen as resulting in a decline in "informed citizenship", as observed in an "increasing ignorance of

basic political and geographic information" (Buckingham, 2000, p. 2). One of the most cited proponents of this perspective is Putnam (2000), who blames the technological "individualizing" through television and the internet for the decreased disengagement from political involvement.

Some researchers have questioned the unilateral focus on conventional news media[1] as a measure of young people's interest in civic and political issues, as well as the idea that news are the only source for political information. According to Jones (2006, p. 367), this view is leading to "dismissals of other, more popular sources of political information and content as illegitimate". Jones points out that citizens take part of many different media genres, and they get knowledge from them in all sorts of subject matters, including political ones. While conventional news stories are just one type of narrative, entertainment media can tell the stories in other ways, and actually be better at explaining them. Jones therefore states that there is a need to look to other locations beyond news media for citizen's engagement with mediated politics.

According to Marchi (2012), the decline in young people's consumption of news media does not necessarily mean that they are disinterested in news or politics – only that they get their information from other sources. In Marchi's study, these sources were trusted adults, entertainment and, especially, online social media. Social media have very special characteristics as it combines the acquisition of information with interaction – interactivity often being stressed as a crucial element for attracting young people and getting them interested in politics (Coleman, 2008, 2010; Rheingold, 2008; Xenos & Foot, 2008).

Children and youth are said to be avid users of digital media, and they are often ascribed with a technological competence that adults are believed to lack. These ideas are expressed in metaphors such as "digital natives", the "internet generation" and so forth (see for example Prensky, 2001). However, as Livingstone (2005) argues, such narratives tend to be overconfident in young people's media literacy – even if young people are accustomed to the use of digital media and master the technology, they are not necessarily competent in handling the content. In a similar vein, the image of young people as always being the proponents of new technology and preferring it in all matters can also be questioned.

In the initial coding of the material used in this article, we saw that, contrary to our beliefs, the young people in our interviews and focus groups were quite ambivalent or even skeptic towards social media as used in relation to politics. They use social media, for sure, and enjoy it, but they express doubts about the suitability and actual usefulness of it, as a way to get information about civic and political matters, to express political opinions in interaction, and to integrate with others in civic or political issues.

The aim of this paper is to take a closer look at how the participants look at social media as a way to get informed in civic and political matters, and how they actually use it for those purposes.

1. By 'conventional' news media, I refer to the various outlets of established news organizations. Televised and printed news are of course included, but also the web sites and mobile apps of the news organizations. 'Conventional' thus refers mostly to the content and its sender, rather than what platform is used.

Research on young people and political participation is often found in one of two strands: one that depicts youth as apathetic and disengaged (Putnam, 2000; Skocpol, 2003), and one that argues that youth may indeed be active citizens, depending on how 'active', 'participation' and 'citizen' is defined (Bennett, 2008b; Coleman, 2008, 2010; Dalton, 2008; Norris, 2004; Smith et al., 2005). What both strands have in common is that they tend to focus on extremes. However, the majority of young people do not fit into either group. Harris et al (2007; 2010) point out the need to look at how also 'ordinary' young people understand and engage in politics and citizenship, 'ordinary' understood as young people who are neither apathetic, nor activists, but somewhere in-between.

The participants in this study are 17-18-year-old high school students from a Swedish medium sized city. Compared to other Swedish 17-18 year-olds, they are relatively interested in civic and political questions, and in keeping updated with what happens in society[2]. By focusing on this segment, this paper aims to mirror the experiences of an understudied group – young people who are interested in politics but not engaged, what Amnå and Ekman (2013) call standby citizens. Doing so, the hope is to get more insight into how young people who are sufficiently interested to take part of civic and political information, understand and reason about different types of sources.

2 Background

2.1 News as related to civic and politic knowledge

News is often regarded as a crucial aspect of political socialization, and as having an important function in the development of young people's political understanding.

The consumption of news has also been found to have a positive impact on the interest in political and civic issues. Couldry, Livingstone and Markham (2007) found that media consumption contributes to public connection and political participation. Different media contribute in different ways, and particularly those engaged by the news are more likely to vote and to be interested in politics (Couldry et al., 2007, p. 170). Ekström, Olsson & Shehata's (2014) study confirms the centrality of news and information in political socialization, and demonstrates the positive longitudinal effects of young people's involvement in online news spaces, as concerns public orientation (as measured by self-transcendent values, political interest and public-oriented peer talk). It thus seems to be the case that those who take part of news are, or become, more interested in politics, public matters, and the common good.

Important as news may be, however, they do not manage to reach out to all. In his book on young people's relation to televised news, Buckingham (2000) states that the viewers do see the tv-news as a significant source of in-

2. Here, the participants are compared to on the one hand a previous, quantitative study of young people's political interest and engagement, performed in the same city (Erik Amnå, Ekström, Kerr, & Stattin, 2009) and on the other hand, country-wide statistics on young people's consumption of news (Statens_medieråd, 2013).

formation about the world, and they trust it above other sources. Still, both young people and adults have difficulties in remembering what they saw, and understanding it. Other researchers have come to similar conclusions. For example in a focus group study, Coleman, Morrison and Anthony (2011, p. 39) found that the news failed to explain the world as the participants recognized it, "often leaving them feeling like outsiders looking on at a drama that even the leading performers did not expect them to understand". In other words, it seems like many people either do not understand the news, or experience them as irrelevant to their daily lives.

According to Coleman et al. (2011, p. 41), news are a certain type of discourse – one of sobriety that possesses instrumental power to describe or even alter the world. Buckingham (2000) connects news to Habermasian views on the public sphere and to ideals of enlightenment, characterized by a belief in objective truth, scientific rationality and knowledge as an un-mediated representation of the world. However, there is no such thing as objectivity - what is presented as objective truth always emanates from one or another perspective, regardless of whether it is intended or not. In an article on the politics of information, Fiske (1992) applies a class perspective, stating that the conventional news reflect the interests and perspectives of the ruling class – the power-bloc. Popular news, on the other hand, are closer to ordinary people's everyday life experiences, hence its popularity. Ultimately, the perceived lack of relevance in the news may be a matter of identification. It is not a coincidence, says Fiske, that the majority of those who take part of "serious" news are white men: "this privileged social position facilitates reading positions which are in alliance with the interests of the power-bloc rather than those of the people" (Fiske, 1992, p. 59). With this in mind, it can be argued that popular media too should be seen as sources of political information and incentives for engagement.

2.2 Dutiful and actualizing citizens

If people do not understand the news or find them irrelevant, why do they watch and read them? Buckingham (2000) believes it is because the news gives people an illusion of being informed. It is also connected to the ideal of the "good" citizen and to the duties that good citizens are perceived to have. What is, then, a "good" citizen? Dalton (2009) gives an overview of the concept citizenship, where three aspects are found to be central: good citizens participate, they accept the authority of the state, and they feel an ethical and moral responsibility to others.

Several researchers have noticed a shift in the way people perceive the "good" citizen. Dalton used the labels "duty-based" and "engaged" to describe the ways that older and younger generations perceive what it means to be a good citizen. Another influential scholar in this field is Lance Bennett. Bennett argues against juxtaposing the rise of engagement with dutiful citizens, as their practices can indeed be engaged, too. Instead he suggests the terms 'dutiful' (DC) and 'actualizing' (AC) to describe the two types of citizenship (2008a; Bennett et al., 2009).

Dutiful citizens experience an obligation to participate in government centered activities, see voting as the core democratic act, become informed

about issues and government by following mass media and join civil society organizations and/or express interests through parties that typically employ one-way communication to mobilize supporters. Especially the older generations tend to experience citizenship in terms of duty. Younger generations, on the other hand, more often side with the actualizing type of citizenship. Actualizing citizens have a more individualistic approach to politics and citizenship. They experience a diminished sense of government obligation and a higher sense of individual purpose. They often experience the traditional elements of politics as inauthentic and without relevance for them. They see voting as less meaningful than other, more personally defined acts such as consumerism, community volunteering, or transnational activism. They often mistrust media and politicians, and instead favor loose networks of community action. These networks are often established or sustained through friendships and peer relations, or by interactive information technologies (Bennett, 2008a; Bennett et al., 2009).

As discussed in a previous article within this project (Sveningsson, 2013), the boundaries between belonging to an actualizing or dutiful type of citizen are not really that clear cut. To start with, far from all young people fit neatly into the actualizing box. The participants in the study rather displayed a mix of both types – they seemed to retain quite a lot of duty-based ideas of what politics and political engagement is about, but they had also incorporated some of the actualizing ideas. According to Zukin et al (2006, p. 4), young people mix views on citizenship "in an intriguing combination of continuity with the past mixed with a variety of new perspectives". The changing citizen norms should therefore be seen not as a paradigm shift, but as norms in transition.

3 Method

This article is written within a project that studies how Swedish youth use the media to orientate themselves, integrate and interact in civic matters in their everyday lives[3]. The project uses a qualitative multi-method approach, including media diaries, class room observations, semi-structured interviews, and focus groups with 26 Swedish high school students, at the time of the data collection 17-18 years old. The project focuses on 'ordinary' young people, i.e., what Harris et al (2010) call the large group of young people who are "neither apathetic, nor activists", but somewhere in-between. The informants were therefore sought not through political organizations or activities, but through their schools. Two high schools in a Swedish medium sized city were targeted: one with a focus on theoretical programs, and one on technical and aesthetical programs. The motive for choosing two different types of educations was to reach young people with varying backgrounds and relations to civic issues. However, one criterion was that all targeted programs should include social studies, to allow for classroom observations.

Because the participation requires quite some commitment from the participants, the sampling was made through self-selection. Five different classes – different branches of the social science program and the construction

3. The project is funded by the Swedish Research Council.

program - were invited to participate in the study. Of 55 students who were interested in participating, 26 were selected: 18 from the social science program (3 different branches) and 8 from technical programs (construction and building services installations). All participants wrote media diaries, but a few had withdrawn or could not participate in the interviews and focus groups. The article uses material from 26 media diaries, 20 interviews (14 young women and 6 young men), and 8 focus group discussions (15 young women and 6 young men), thus approaching the subject from several angles. Combining techniques and data from various sources allows for a more comprehensive picture of the participants' practices and experiences. In this way, we get to share the participants' experiences and opinions of getting civic and political information through social media, but also how they talk about it among their peers, and what they actually do. All data are in Swedish, thus the quotes are translated into English.

Informed consent was attained and all names of participants have been changed to maintain participants' privacy. The list of participants below shows the composition of the focus groups.

Social science program	Technical programs
Focus group 1: Marie, Nora, Lina, Isabell	Focus group 7: Leo, Lars, Oscar
Focus group 2: Natalie, Ivar	Focus group 8: Linda, Ida
Focus group 3: Lisbet, Iris, Louise	Henrik (media diary and interview)
Focus group 4: Erika, Olivia	Ivan (only media diary)
Focus group 5: Daniel, Erik	Sara (only media diary)
Focus group 6: Nanna, Hanna, Maja	
Marina (media diary and interview)	
Evangeline (only media diary)	

The material from the media diaries was used as a base to get a description of the participants' actual use of media to get civic and political information, while the interviews and focus group discussions provided insights into the participants' experiences and understandings. Interviews and focus groups were subject to a thematic analysis, a method inspired from the procedure of grounded theory, however, without its aim at developing theory (Braun & Clarke, 2008). Rather than working with hypotheses and pre-existing code frames, I have leaned towards an inductive, or data-driven, way of analyzing data that aims at identifying recurring themes in the data set.

The participants are not representative for all young Swedes. Judging from the media diaries, the participants' consumption of news is higher than that of the average Swedish 17-18 year-old (Statens Medieråd, 2013). Being self-selected and studying in programs that include social studies means that they are also more interested in civic issues than the average. When recruited, the participants were asked to range their interest in politics and civic issues. Six participants said they were very interested, twelve moderately interested, and two not at all interested in politics and civic issues. According to a previous, quantitative study performed in the same city (Erik Amnå et al., 2009), 25%

of the young people were very or rather interested in politics, 29% were not particularly interested, and 45% not at all interested in politics. Thus, the participants in this project mostly represent the first group, who are very or rather interested in politics. As previously mentioned, the targeted group is "ordinary young people" who find themselves in a middle position, somewhere between being activist and apathetic. It is true that the participants' relative interest in politics makes them closer to the activist than the apathetic end. However, most of the participants are not engaged either in formal or activist politics. Of the 21 interviewed participants, two were members of the youth associations of political parties, and three were members of civic organizations. Thus, most participants represent the position of young people who are interested but not engaged, what Amnå and Ekman (2013) call standby citizens.

The results will be presented in two sections. The first lines out the practices of the participants – how they inform themselves about civic and political matters. The second focuses on how the participants perceive social media as a way to get civic and political information. Here, six themes were identified: ubiquity, individualization, fragmentation, subjectivity, unreliability and triviality. The main findings are summarized and discussed in the final section of the paper.

4 Results

4.1 Getting to know what happens in society

One of the areas of interest within the project concerns how young people orientate themselves in civic and political matters. As discussed above, previous research has mainly focused on conventional news media for these purposes, and this seems to be the case for ordinary people as well. According to Coleman et al, (2011) most people consider 'news' to be a specific type of source that has a certain form – they should be "hard news in serious and solemn forms " in order to count as news. To avoid a unilateral focus on conventional news the question was posed in a different way to the focus groups: how do they get to know about what happens in society? The participants name several different sources, above all TV, newspapers, Facebook and Twitter.

All of the participants are avid media consumers, and most of them are eager to keep updated with what happens in society. They do this via traditional channels such as printed and televised news, and they also check the apps of the leading newspapers in their mobile phones. When asked how often they take part of news, two persons answer "never", two persons "once a week", six persons "2-3 times a week" and ten persons "4 times or more a week". Most of the participants are thus among the group of young Swedes who take part of the news most frequently.

The Nordic countries have a strong tradition of newspaper reading. Although the consumption of printed newspapers has declined here too, the number of newspaper reading citizens is higher than those of most countries (Elvestad & Blekesaune, 2008). According to a report from Statens Medieråd

(2013) 56% of Swedish 17-18-year-olds take part of printed news once a week or more, as opposed to only 8% who say they never read newspapers. The corresponding number for televised news is 59%, for mobile news 57% and for online news 69%. The reading of printed newspapers has decreased, but this is likely due to an increase of online and mobile news sources. Young Swedes' total consumption of news has actually increased since the last report in 2010. Young Swedes also seem to have fairly positive feelings towards news, something that has also increased since 2010: 83% say they learn things, 55% find it interesting, 27% find it fun. 40% get angry when they read or watch the news, however, this means that they care, as opposed to only 11% of the 17-18-year-olds who say they do not care and/or find news boring. Only 8% find the news difficult to understand.

The participants who read printed newspapers regularly were above all those whose families had subscribed newspapers. These participants say they may read the newspaper if it lies on the breakfast table, above all during weekends when they have more time. Sometimes the reading is initiated by a parent (most often the father) calling their attention to a specific article. TV news is not something that the participants intentionally seek out, but they may watch it if is between other programs. Some of the participants also see watching TV news as a way to spend time with their parents.

As the focus groups discuss further, it becomes clear that their social networks are very important for getting to know what happens in society. They often get information on what happens in society from family and friends, either in face to face or mediated conversation.

Interviewer: Where do you get to know things about society and politics?

- Lars: Much comes through social media.
- Interviewer: Yeah?
- Leo: I get quite a lot from my brother, he's actively engaged in feminist and socialist questions.
- Interviewer: Alright. Is that within some party or organization?
- Leo: Partly within the Left Party, and then he volunteers with an organization that's called Soppkök Uppsala[4]. They go once a month or so and dispense food and clothes to homeless people in Uppsala. And well, he organizes in, well, he studies to become a nurse.
- Interviewer: How does this happen? Last time you got to know something from him, what was it and how did it happen?
- Leo: Well, I guess last time was when I met him because it wasn't so long ago. But usually it's when he shares stuff on Facebook or that we talk on the phone. He asks what I think of a certain question and then I haven't even heard of it…

The participants' stories coincide with previous research, in certain respects. They take part of news from established news organizations considerably more than the average Swedish 17-18-year-old (Statens Medieråd, 2013), and more than the participants of Marchi (2012) and Coleman et al.(2011). But

4. Swedish for "Soup kitchen Uppsala".

when it comes to the other sources the picture is very similar. The participants, just as Marchi's (2012) interviewees, get political and civic information from trustworthy adults, entertainment, and social media. In the following sections, we will proceed to look at how they understand specifically social media as a way to get civic and political information.

4.2 Perceptions of social media

Ubiquity

One important theme in the participants' discussion is their way of talking about the media as ubiquitous. For the participants, media are always present either as a center of activity, or as the background of other activities. They feel that it is easy to keep updated and say they get information on actual topics very fast - they just have to take a glance at their mobile phones. About half of the participants have smartphones, most of them with apps from news organizations, and they check them now and then throughout the day. But this is generally not how they get their first information; in most of the cases they get it through social media, above all Facebook and Twitter.

- Isabell: I was thinking about news, you know that's something that Twitter's really good at. Like, first you get like just a few words and then you go on reading, if you don't understand what they mean. So from there on, because you update it all the time, or more often than they do at the DN[5] app anyway, so you get the news quite fast that way.
- Interviewer: So do you often get your information from Twitter?
- Marie: Well...
- Interviewer: If it's about current news-matters.
- Lina: Yes.
- Marie: You might have read something in the morning, like skimmed through an article, and then it comes up again.
- Lina: But things that happen right now, that's where Twitter is just great.
- Marie: Yeah, it's absolutely-
- Lina: Like if-
- Marie: "Now, Margaret Thatcher has died". You got to know that right away.
- Lina: Yeah, exactly.

According to Coleman et al (2011), the idea of news as ubiquitously available and accessible in many different forms is tightly related to media convergence - a term that describes the integration of media platforms and content. The participants compare their media consumption with that of previous

5. Dagens Nyheter - Sweden's largest morning newspaper.

generations, saying that in those days they would not have heard the news until they got home at night and turned on the TV news. The participants do appreciate the opportunities that social media give them to keep updated, and they have positive feelings towards both Twitter and Facebook as sources of civic and political information. However they also address the shortcomings of social media as a source of news.

Individualization

It is true that mobile technology makes it possible to keep updated in almost any subject. However, the way the media landscape look also implies that the media consumption becomes individualized. Where previous generations took part of in principle the same content from the same media, the consumers of today have far more sources to choose between and can customize the news flow to get their own individual picture of what goes on in the world. These opportunities are appreciated - according to Pew Research Center, 40% of American Internet users say that an important feature of news websites is the ability to customize the news they get from the site (Purcell, Rainie, Mitchell, Rosenstiel, & Olmstead, 2010).

The opportunity to customize what news turn up in news apps, and to follow only certain types of news makes the supply quite specialized. The same can be said about social media, where users' feeds look different depending on what persons or organizations they follow.

- Isabell: I'd imagine that- you know, you choose what you want to read about, so you get very little perspective on different things.
- Marie: Yeah, absolutely.
- Isabell: You know, you get- I mean if you follow-
- Marie: If you follow just your closest friends, then you get very much just that side of it.
- Isabell: Yeah exactly, and if you follow- you know you often follow- There are lots of people on Twitter who write about equality, and if you follow many of them, then you'll get that side, and when they answer each other and agree with each other or when they argue about the same thing, or *for* the same thing. But you seldom get- unless something is retweeted - you seldom see anybody who argues against it.
- Marie: Like, you don't follow any Sweden democrats[6].
- Isabell: No, exactly.
- Marie: You don't see anything from that side.

Some of the participants perceive Twitter to be a very political medium, but say that it is probably because they follow people who are politically interested and/or engaged. For persons who make other choices, Twitter will be perceived differently. The metaphor of 'echo chamber' has been used to describe this phenomenon, where individuals are exposed only to views that

6. Right-wing populist party with its roots in nationalist and racist organizations.

match their own (Marchi, 2012). This metaphor seems to be quite close to the participants' perceptions, as they express the idea of a one-sided flow of news.

Fragmentation

The participants also feel that the image they get through apps and social media is partial and fragmented and show only bits and pieces. They compensate for this by using several different sources, in a bricolage or a puzzle of stories. One of the groups describes the typical process through which they consume news:

- Interviewer: Yes, do tell me about that, Margaret Thatcher, how did you get to know about that and what did you do?
- Lina: I was sitting with a friend who had some- I don't know if it was CNN. Like, she gets- when there's some- It's like news flashes that come up. And it was just like "Hey, Margaret Thatcher has died", and just- Well, then you started to talk about it and then all at once it was all over Twitter, and a lot of people who are very left wing just "Yes, finally!" and wrote a lot about it. That's what it's like for me, when a news story comes up. And then you see it on Twitter and you may not really understand it, and then it's just like "well, I go check it up on DN, and then everything just clicks into place.

The media landscape that meets today's youth is dramatically different from that of previous generations. As media forms converge, content can be acquired through various mobile platforms and technologies. As a consequence, citizens' relation to the news has changed. Today's youth (and adults) increasingly take part of the news online via the websites and news apps of newspapers and TV companies, but also through blogs and other social media. On a typical day, 92% of Americans use multiple platforms to get news, as opposed to only 7% who use one single source (Purcell et al, 2010). According to Hermida et al, (2012), social media users use a wider variety of news media than non-users, and are more likely to access websites from non-traditional and/or international news outlets. This type of consumption has been described as an "a la carte" model of news gathering, where "youth tend to know a little bit about a lot of subjects, researching topics of special interest in more detail" (Marchi, 2012, p. 248).

Where previous generations had to wait for broadcasts and publications of news, there has been a shift from push to pull in news consumption. Coleman et al. (2011) found three types of news that their focus groups wanted: utilitarian, reliable and amusing news. Especially the utilitarian consumers, who want their news to be useful, expressed positive feelings about the pull behavior. They prefer to look up information themselves, and do not really trust the news media and their evaluation of news. According to Coleman et al., this pragmatic seeking for useful news signifies an abandonment of news consumption as a social duty, thus they relate the utilitarian news consumers to the actualizing citizen type. Here, I would like to add that even if news consumption patterns may have moved towards a pull behavior in the practices

of googling and seeking for information, the participants usually do not do this unless they first get an incitement, a push, from their own social network. Once they are at the sites of news media, however, they may very well proceed and click around and read more about the topic at hand, or other stories.

The activity of putting pieces together does not really make the information less fragmented, as it still consists of many small pieces from different sources. However, the picture gets more complex, showing more than one perspective. As we will see, the question of perspectives is one that the participants seem to care much about.

Subjectivity

As discussed above, the news flow in social media is experienced as quite one-sided and as connected to the personal network of the individual consumer. The participants also see it as strongly subjective. They are well aware of that what they get to see is second hand information and that it consists of other people's opinions and reactions to what has happened, rather than the events per se.

Personal connections with friends and family have been compared to a filter in young people's news flow (Marchi, 2012), very similar to the choices they make in their customization of news. The sorting process that occurs in social media may not be intentional in the same way, but users do value their personal network as a way to filter the news, rather than solely relying on the professional judgment of news organizations or journalists. In Hermida et al.'s (2012) study, for example, the respondents were twice as likely to prefer news links and recommendations on Facebook and Twitter that came from friends and family, than if they were posted by journalists or news organizations. The participants talked about the impact that their personal networks had for what news came to their knowledge.

- Linda: You know all this that happened in Boston, in USA.
- Ida: I haven't seen so much about that in Facebook.
- Linda: Well, I got to know it through Facebook. Otherwise I wouldn't have had a clue, I'll tell you that right away.
- Ida: Yeah.
- Linda: Somebody wrote "it's a tragedy what happened in Boston". And I just "what happened in Boston?" and then I just had to go check. So I looked around, talked about it with someone, and all this was through Facebook, otherwise I wouldn't have known it because then I wouldn't have become interested you know.
- Interviewer: But when something like that happens, then you click or google it?
- Linda: Yeah, exactly. If I see that any of my friends has written anything about Boston "well, it's sad what happened", then it's like "I wonder what happened?" And then I click up Aftonbladet[7] and seek for "Boston".

7. One of Sweden's leading evening tabloids.

According to Marchi (2012), young people often prefer to see opinions related to the news content, this being a reason why they use social media as a source to news. Even if the participants, too, do like to see opinions expressed, they expressed a wish to sometimes see things from more than one side. In order to do that, however, they would have to follow and "like" people and organizations that they do not sympathize with, and this could, indeed, be devastating for their presentation of self. In social media, everything you write, link to or pass forward becomes part of your "face" (Goffman, 1967), as do the persons and organizations you are connected to.

The participants did not seem to worry too much about the perceived lack of objectivity. They argue that it is relatively easy to understand from the context what the opposite side is, as the postings they get are from people who objected to something. However, they generally do not experience the opposite side firsthand. Therefore, they enjoy it when someone from their circle of Facebook friends turns out to have different ideas than themselves (however, within certain limits; as they say, "you don't follow any Sweden democrats").

They also like it when news stories provide them with a new way of seeing things. One focus group discussed one such occasion, connected to one of the most important social media events in Sweden during 2013, in which Swedish author and playwright Jonas Khemiri wrote an open letter to Minister for Justice Beatrice Ask. The topic of the letter was the REVA project[8], and Khemiri's experiences of the way Sweden treats immigrants and fugitives. The letter was first published in the cultural pages of Dagens Nyheter, and it received an enormous response in social media, as one of the most shared Swedish articles ever (Karlsten, 2013).

- Olivia: Well, they talked about it in Filip and Fredrik's podcast, it had been some- I don't remember the exact background of it, but some politician had made a statement on this REVA, what is it called, is it called REVA?
- Interviewer: Yes.
- Olivia: Like, the police get to- what was it? They can demand identification, well papers from people who look suspect, and she just "I don't understand the problem" or something like that. And then someone, I don't remember his name, but someone who was really good at writing had written a really long article and like just "this is easy for you to say, but it's not that simple when you…" and tells his story because he's an immigrant[9], you know. And he tells a lot of examples and he has done a lot for society and still he's met by, you know…
- Erika: Hostility.
- Olivia: Yeah, exactly.
- Interviewer: It must have been Jonas- what's his name? Khemiri or something.

8. In 2009, the Swedish government launched project REVA, which aimed at identifying persons without residence permit and making them leave the country. In 2012, the procedures of the police were much criticized in media, which led to an intense debate.
9. Actually, it was Khemiri's father who came to Sweden as an immigrant.

- Olivia: Yes it was, that was it.
- Interviewer: This letter got a lot of attention. "Dear Beatrice Ask".
- Olivia: Yeah, Beatrice Ask.
- Interviewer: Yes.
- Olivia: Well, that's what it was like, and I read it and I was really touched, and you know. But what they talked about in Filip and Fredrik's podcast was that those who'd really need to read this, they don't. Because it really is that kind of a letter, it really should get even more attention, because you need to be able to see things from different perspectives and he really managed to show that perspective.

The participants felt that, through Khemiri's letter, they got an insight into a perspective that they seldom got to see otherwise. Through his way of telling the story in a first-person perspective, shaped as a personal letter, it also managed to make the political issue come closer to people who could enter into the situation of immigrants. The story thus succeeded in transforming the, for many Swedes, distant question of immigration politics into one of immediate human interest.

Thus, even if social media is perceived to give a one-sided view on things, the participants feel that it can also provide different perspectives from that offered in conventional news media. This can be seen in relation to Hermida et al's survey (2012), according to which a majority of 1682 Canadian adult social media users[10] felt that their social circles actually provided them with a broader range of news and information than solely traditional media would do. For Marchi's interviewees, it was, in fact, a desire to gain a more balanced understanding of news that made them go to blogs, Facebook postings, YouTube videos, fake news and other nontraditional sources of news. They did not like the conventional news media's strictly objective way of presenting news, but preferred to hear different opinions. Jones (2006) similarly argues that Fox news, which is known to openly declare opinions, is enormously popular. According to Jones (2006, p. 369), this suggests that "at least some of them want or desire more from political communication than just 'information'".

As Fiske argues (1992), the supposedly objective news discourse is seldom objective, but a manifestation of hegemonic discourse, and a reflection of the perspectives of the "power bloc". The flow of news on social media has been claimed to reshape the news business' relationship with its audiences as it weakens the authority of the journalists who no longer decide what the public needs to know (Hermida et al., 2012). Here, social media affects not only which news gets through to the audience, but it also offers the possibility for people to be spoken to in a way that allows them to connect with the stories. Through its mix of voices, discourses and genres, social media offers an opportunity to make political stories and news feel closer to 'ordinary' people's everyday lives, and thus be experienced as more relevant.

10. 59% of all and 69% of the younger respondents.

Unreliability

Social media is not only perceived as partial and subjective but sometimes even outright unreliable. Here, anonymity is mentioned as an explanation, along with a lack of accountability – users who spread false rumors or make up news are not held responsible for it. Several of the groups see risks with social media – its fickleness and the uncertainty of who is the original sender behind messages makes it easy to be lured into taking part in dubious actions, or sharing false information. Several groups discuss the film Kony 2012[11], which many of the participants shared before they started to question where the film came from and why it was created in the first place.

- Louise: I never shared it.
- Iris: I don't know, it was something that a lot of people did. I thought it was- It was an half hour long video, a youtube clip you know.
- Lisbet: What was it about?
- Iris: Like, the power and how children…
- Louise: It was an American who had…
- Iris: Yeah, who'd been there for a long time, and you know, first when I saw the film, I just went "God, this is touching, and I just like…"
- Louise: When I saw the film I thought it felt like propaganda so I never shared it.
- Iris: But it was. I shared it, but then I started to reflect on it, you know I just clicked "share" first, because I thought it was so well done, it had a message, something that doesn't get so much attention otherwise and I thought it was a good thing. But then afterwards I started to reflect on it, and we discussed it at school as well, like how- maybe it was propaganda, but what did people want? You know…
- Louise: Yeah, like, who's behind this video?

The participants also discuss the occurrence of facebook groups that are created around seemingly benevolent purposes, which once they get enough members change name and purpose into more dubious ones, for example legalization of drugs. All these kinds of content require quite a bit of media literacy and critical thinking from the users – and there are likely differences depending on the users' backgrounds and educational level. Many of the participants, especially those from the social science program, come from middle class families with parents being teachers, white-collar workers or even journalists. These participants often talk about civic issues and news with their families at home. It makes sense that they would be relatively savvy media consumers who are aware of that everything they read or watch has a sender, who may have intentions that go beyond what is immediately obvious. However, also the participants from the technical programs talked much about the im-

11. Kony 2012 is a film produced by the organization Invisible Children, to raise an opinion against the militia leader Joseph Kony. The film received huge attention as one of the top international events of 2012.

portance of being critical of the sources, and it seems to be something that they all discuss much at school. Being critical of the sources is one important part of media literacy, however, for some of the participants, it leads to the dismissal of everything posted on social media as being biased and potentially false.

Triviality

Even if the groups experience a lack of trust in the information they get through social media, this does not seem to be perceived as a big problem. One reason is that the participants do not regard social media as news media at all, but rather as a trivial pleasure and pastime.

- Nora: That's what it's like for me. Twitter is just for fun. Because I get everything- You know I study a branch that's called "The human in the world", and that's a lot of politics, politics, politics and then other related subjects, so I get my share from there so to speak, so I don't feel I need…
- Interviewer: You mean at school?
- Nora: Yes, exactly. I get my share from school, and that's why, you know, social media for me is just for fun, like a pastime. It's not a place where I go to- No, it's only a pastime, really.

The participants' stories show some ambivalence. On the one hand, social media are experienced as insufficient – its content is individualized, fragmented, subjective and unreliable – and to get a more correct picture one needs to follow up stories in neutral and "serious" news media, preferably several ones. At the same time, quite a few of the participants admit that they often opt out of "serious" news because they experience them as boring or because they feel the news do not concern them. In a similar manner, some participants talk about the un-following of political leaders on Twitter:

- Hanna: But there's- I mean the party leaders have Twitter too, so you can follow them and see.
- Interviewer: Do you do that?
- Hanna:: Well, I may. Perhaps not really party- but, well. But you can click around and then you come into those sites and then you scroll down and just go through the flow.
- Maja: Yeah, exactly. I used to do that, I followed a few political leaders in Sweden, but then it turned out that I- I just passed through them anyway because I think it's boring.

Marchi (2012) refers to Costera Meijer, according to whom the dry and predictible format of professional news alienates youth, showing how her own interviewees found TV news boring, repetitive, and irrelevant to their daily lives. The importance of personal relevance has been discussed by for example Fiske (1992). For Fiske it is not the value of the information per se that is the crucial, but to what extent the media content let the readers experience the content's relevance for their everyday lives. As discussed above, in relation to

the theme subjectivity, people often prefer news content posted by friends and family. Here, the connection to people that one has a relation to – friends, family, or famous people – seem to increase the perceived relevance. If people close to you post a message about something that has happened in the world, this will likely make the possibility of identification stronger, especially if they have firsthand experience. Thus, despite being seen as trivial, social media has the important role of opening up a first window of interest into politics and civic issues.

- Isabell: But then, you can also become engaged on the internet, like, stronger, faster. Like, if you see- if there's a facebook friend who shares something, then you have a connection to the person who shares. Whereas if someone stops you on the street, you might just walk away.
- Lina: Yeah, exactly. Or if you follow Amnesty, because then you've already chosen in a way, I've chosen to get information from you because I like you.

It seems to be quite common to draw a dividing line between on the one hand "real", serious news, and on the other hand pastime and trivia. Coleman et al. states that this dichotomy between "real" and "popular news" is based upon a moral perspective, according to which "news only becomes News when it is spoken about in certain ways, connected to remote and formidable institutions and entitled to command the attention of the otherwise disinterested" (Coleman et al., 2011, p. 41). Coleman et al.'s focus groups felt a tension between civic obligations and affective dispositions, and seemed to feel that they had to apologize for going with the light news. The participants do not go so far as to apologize for their consumption of light news as found in popular and social media. On the other hand, their clear stance that social media is not news, "it's just a pastime, really" can be interpreted as precisely that. The participants do not have any illusions concerning the quality of news in the popular media, and they stress that they take part of "real" news as well.

However, even if the participants do take part of news, they say in several ways, in both interviews and focus groups that they feel they should be "better" at reading the newspaper, following televised debates and take part of serious news. For them, the consumption of news is very much related to an idea of being "good", which is in line with the citizen ideal of the dutiful type.

5 Discussion

As this paper has shown, the young people in the study use various sources to get to know what happens in society. Social media is one, very important source – it is often where they first hear about news, and it is the media they use most throughout the day. However, they are ambivalent to it – they appreciate the immediateness of it, but they are also troubled and talk quite a lot about its perceived shortcomings and risks.

Participants feel that the news they get through social media are individualized, fragmented and subjective, giving a biased and possibly false image of what happens in society. They also have the image of social media as light-

weight, a trivial pastime and pleasure. They compensate for the perceived lacks by looking up stories in other sources that they experience as more reliable – conventional news from respected news organizations. They are eager to get several perspectives and make bricolages, which do not make the news less fragmented, but offer a more complex picture.

According to Buckingham (2000) news are often perceived as complicated and difficult to understand. The participants do not seem to have any problems in understanding the content of conventional news media, and this goes for Swedish 18-year-old generally (Statens Medieråd, 2013). However, they sometimes perceive the serious news as irrelevant and boring. According to Fiske (1992), what news are seen as important and relevant depends on class and status. What does this means for the young people in the study? As discussed above, most of them belong to the middle class and bring some cultural baggage from their families. They have learned how to decode the news and have also been socialized into hegemonic ideas of what stories are important to tell and in what forms they should occur. However, being young, they are largely excluded from the political sphere, and the news mostly do not mirror or relate to their situation. This is probably one factor that explains their ambivalence towards the serious news and the dichotomy between "fun" and "accurate" information on what happens in society.

Similarly to previous studies (Coleman et al., 2011), the participants distinguish between "good" and "bad" news sources in a way that is reminiscent of perceptions of high and low culture. Even if the low, or popular, culture and news are often perceived as more fun, it is not as simple so as to say that young people will always want their information to be lightweight and popular. Coleman (2008) for example tells the story of a certain e-citizen site that went through several redesigns, as the young people did not like it. It turned out that what the young people wanted was not fun and gimmicks, but they wanted the site to be serious, and they had fairly old-fashioned ideas of how the online tools should be used in this context. Maybe different groups prefer information in different ways. But it may also be that they have expectations of how content of different topics and genres should be presented. Even if people like to be entertained, being fun is not what they expect from "real" politics and news – these are supposed to be serious. This may be even more important for young people who are actually interested in politics, as traditionally perceived, which is associated with the more dutiful citizen type.

Dutiful and actualizing citizens tend to take part of civic and political information in different ways. The dutiful citizens see it as a duty to inform themselves in civic matters, and do this mainly through conventional mass media. The actualizing citizens, on the other hand, get to know what happens in society through their social networks and various online venues. From the participants' stories, it seems like their practices of orientating themselves in civic and political issues resemble the descriptions of the actualizing citizen type, as social media and personal social networks are very important sources of information for them. However, their ways of reasoning about news and civic and political information seem to lean more towards dutiful citizen norms, privileging conventional, "serious" mass media and institutionalized politics. The consequence of this is that the participants do not see their consumption

of news from social media as "real", and have the view of themselves as not good enough at taking part of the news, just because it isn't in conventional forms. The participants talk much about what they feel they "should" do and measure their own news consumption against that of an imagined dutiful citizen.

Citizen norms are norms in transition, but this transition is not always a smooth one. The participants' stories show how they take part in changing practices of media and news consumption. These practices are sometimes in tension with norms of citizenship - although practices change, ideals and norms of citizenship seem to be more persistent. At the same time, changing practices will, hopefully, in turn influence norms and drive changes. Despite its shortcomings, social media offer important potentials and opportunities, above all in their immediateness and actuality, but also in increasing the perceived relevance of political and civic questions.

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