REFRAME BOOKS

The Tablet Book

Edited by Caroline Bassett, Ryan Burns, Russell Glasson and Kate O'Riordan

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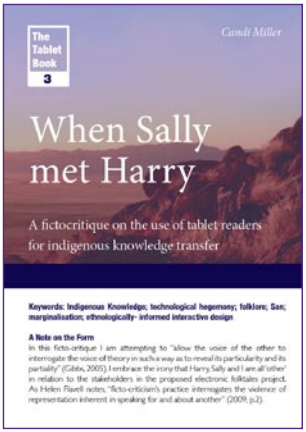

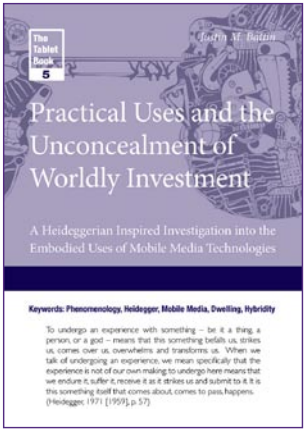

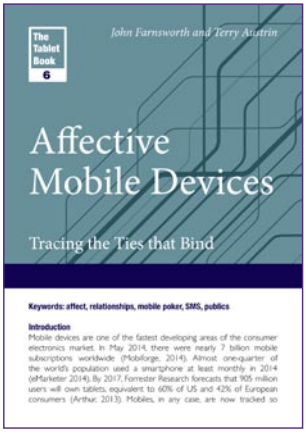

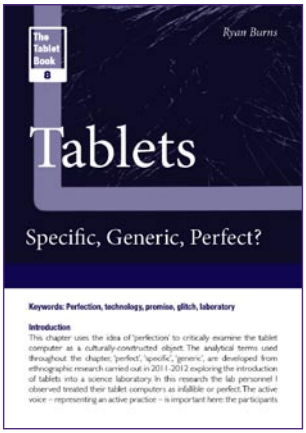

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Jacob Craig is a rhetoric-composition specialist in the Department of English at The Florida State University. His research interests include theories of composing, digital rhetoric, and text technologies. More specifically, his research explores the effect of media, technology, and materiality on the composition, reception, and circulation of texts. He has presented his research at conferences such as Conference on College Composition and Communication, International Writing Across the Curriculum Conference, Council of Writing Program Administrators Conference, Computers and Writing, and South Atlantic Modern Language Association Conference.

John Farnsworth is an affiliate of the Media, Film and Communication Studies Department at Otago University, New Zealand. He is also a psychotherapist in private practice. Recent work includes publications in ethnography, psychotherapy, social exclusion, networks, mobile and electronic media. His email is johnf@earthlight.co.nz.

Russell Glasson studied Information Systems at Birkbeck, University of London (1998 - 2003), and worked in the video games industry until 2009. Since 2010, Russell has conducted research into the effects readers experience when adopting electronic digital reading material to replace traditional material sources. He employs a variety of ethnographic and discursive methods to understand how digital materiality might impact

the experience of the text. Prior to this project, Russell used a similar approach to seek to understand the implications that digital distribution has for the professional standing of video game producers. He also co-edits SEQUENCE, a REFRAME journal.

Candi Miller teaches Creative Writing at the University of Wolverhampton. She is the author of two novels about the San (Bushmen), *Salt and Honey* (2006, Legend Press. Reprinted 2011, Tindal Street Press) and *Kalahari Passage* (2012, Tindal Street Press). She is currently seeking funding for research around the digitization of San oral folktales.

Kate O'Riordan is a Reader in Digital Media at the University of Sussex. Her work is a cultural studies of emerging technologies, particularly those at the intersection of the biological and informatic. Kate has written about digital and biotechnologies from gaming and the Internet to human cloning and genetics. She engages with feminism and queer theory as modes of enquiry as well as STS and media studies; and is invested in thinking about and participating in new forms of publishing and knowledge production.

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investigated practices of digital mapping of social controversies and the use of digital tools in social sciences. She also conducted research on interactivity and enhanced publications at the Royal Netherlands Academy of Arts and Sciences in Amsterdam, with the eHumanities group, which focuses on digital humanities.

Susana Tosca is an Associate Professor at the IT University of Copenhagen. Her PhD thesis, a poetics of hypertext literature, was awarded the *summa cum laude* distinction in 2001. She has worked for many years on electronic literature, the storytelling potential of computer games, transmediality and complex reception processes, with a side interest in fan activity and the distributed aesthetic formats of the Web 2 era. She is now working on a project about digital production in primary school. Her latest book is *Understanding Videogames* (Routledge, 2013; 2nd ed.).

Edited by Caroline Bassett, Ryan Burns, Russell Glasson and Kate O'Riordan

The Tablet Book

Editors' Opening Statement

In 2013 research indicated that 43% of the US population owned a tablet of some kind.[1] At the same time, marketing reports indicated that tablets would take over from desktop and laptops.[2] UK sources indicated that tablet ownership was at 30% of the population in the same year.[3] Multiple reports in the technology press used the tag line 'the year of the tablet'. It was in this context, then, on 10th April 2013, that the editors of the volume that you are reading hosted 'The Tablet Symposium' at the University of Sussex, UK.

As tablets were already being used, theorised and discussed in a variety of contexts, the symposium was motivated by a desire to examine their visibility, as well as the excitement around their emergence, through the lenses of different disciplines. On the one hand, the symposium aimed

> to examine questions about the take up of tablets, readers and iPads across many walks of life including academic, artistic, pedagogical, medical, corporate, activist and everyday contexts. On the other hand, [this event aimed] to create a space of dialogue, discussion and research community across [these areas].[4]

The symposium included sixteen presentations; each addressed the tablet computer in a different way, reflecting the broad scope of the call for papers. A summary of the symposium can be found here.[5] The range of speakers, topics and perspectives made it clear that this object—'the tablet computer'—embodies a wide range of meanings, practices and contexts. Yet there were also many intersections and shared points of reference between the presentations. In this way, the symposium demonstrated both the range of meanings attached to the tablet computer, and the value in identifying ways to connect these meanings. This book builds on that event, publishing research and commentary to mobilise a range of perspectives and approaches in thinking about and understanding the tablet computer.

The original Call for Papers for this volume asked for "empirical, theoretical, critical and creative responses to tablet computers, e-readers and other artifacts." We are pleased to say that the seven chapters selected for publication represent all of these approaches, and develop these ideas in ways we could never have envisaged. Some chapters are text based, others

use visual and audiovisual media to think about and make use of the possibilities that an e-book, read on a tablet, can offer. Thus, the chapters and the project as a whole offer differences in academic approach, in modes of engagement with the object, and in their particular form and design. These creative and critical responses taken together enable a *refraction* of the tablet. They take it apart from the point of view of production, the object as it is experienced, its unseen dimensions, and its contexts of consumption, and reassemble these to unfold the object in its heterogeneity.

In 'Tablet Technostories', Ana-Marie Raus provides a rich description of the moment of adoption of tablet computers. Her examination of the thoughts, feelings, expectations and experience of using a tablet computer for the first time registers an important moment in the emerging history of tablets. The variety of thoughts and feelings associated with tablets when first used is striking. Raus identifies themes including theatricality, the primacy of touch, the blur between work and leisure and the problem of determining the correct or proper role of the object. Taking into account this range of experiences, Raus theorises the tablet as a fluid object.

In 'When Sally Met Harry', Candi Miller interrogates tablet computers and academic practices through the theme of indigenous technologies. If the overall register of this book is that of an attempt to describe, understand, define tablets, then Miller's ficto-criticism reminds us that technologies are always used in context, and that academic intervention must be aware of its own conditions of production. In this piece the liberal promise of empowerment through technology is questioned through a reflection on the encounter and dialogue between different power relations, disciplines and cultural contexts.

Jacob Craig's chapter 'Print Made Fluid' also deals creatively with the form of the e-book. His chapter reflects upon the role of the code 'behind the page' of the e-book in creating meaning for the content. The code behind e-book formats is on the one hand designed to make the e-book adaptable to different devices (so that the text that you are currently reading appears clearly whether you are reading these words on your iPhone, your Samsung Note tablet, or your Kindle Fire). However, Craig also explores the idea that, on the other hand, in aiming to make the text fluid over platforms, e-book formats also fix the e-book in the semblance of a printed book. In his exploration of these parallel impulses – in which the pursuit of an adaptable e-format simulates print – Craig allows an approach to what seems to lie behind, or beyond the surface of the object.

Justin Battin's 'Practical Uses and the Unconcealment of Worldly Investment' works within a phenomenological framework of encounter with the object to consider the immediacy of the experience of using a tablet computer. Working with the Heideggerian concept of 'dwelling', Battin rejects the idea that tablet computers are simple tools that are used for predetermined purposes. He proposes instead that by using tablets, people build intermeshed worlds that they weave through and knot together. Tablet use can be thought of as a kind of world making in this analysis and it opens the tablet up as an object refracted to expose a spectrum of experience.

In 'Affective Mobile Devices' John Farnsworth and Terry Austrin move away from the object itself to focus on relationships that develop in the use of tablets: relationships between people mediated by tablets, and relationships between individuals and their devices. Interrogating these two modes of relationship simultaneously, Farnsworth and Austrin examine the creation of sociability and affective publics in SMS friendships and mobile poker. They

argue that sociotechnical objects allow flows of desire to circulate, and that tablets and similar objects amplify temporary stabilizations of affective relationships developed in this way. In this analysis the felt dimensions of tablets and their capacity to vector patterns of feeling and desire are brought to the foreground.

Susana Tosca and Helle Nina Pedersen, in 'Is There a Text in this Tablet?', consider the form of the tablet from the perspective of the reader. Taking the specific materialities of e-texts and e-reading practices, they discuss a constellation of material and immaterial objects including e-texts, e-literature, tablets, e-readers and paratexts. Tocsa and Pedersen use a self-reflexive comparison of reading practices with paper books and with e-books to develop a critique of this kind of comparison. While acknowledging that e-texts are distinct from paper texts, their ethnographic study of reading demonstrates that nevertheless readers make sense of e-texts within the framework of print culture. Taking these different kinds of encounters as different kinds of reading imports a 'compare and contrast' framework into research that might, more productively, ask about readers' capacity to engage with multiple kinds of texts.

In 'Tablets: Specific, Generic, Perfect' Ryan Burns proposes that a productive critique of tablets can be achieved by treating tablets as perfect. This analysis takes the enchantment with the object and its invested perfection seriously, and allows this to operate as a heuristic device to understand this treatment of the tablet. Examining the relationship between the tablet and its apps, Burns argues that users tend to find fault with apps, but never with the device itself, thus its perfection remains intact whilst being indefinitely deferred. Developing an analytical framework based on perfection, Burns contends that tablets are a specific instantiation of a

general technological rationality that functions on the basis a teleological promise of perfection.

We close this introduction with a note about formats and timescale. The realities of open-access publishing have meant that this (in principle) 'quicker than traditional publishing' model has taken around the same time as traditional publishing. The time and energy that have gone into producing this book are indicative of the material processes and labour that lie behind the creation of all digital objects. We have chosen to present this volume as a collected e-book and each chapter is also individually available as a PDF. While we believe that the best way to approach this book about tablets is to read it using a tablet or an e-reader, the content of each chapter does speak for itself, no tablet required.

Notes

1. Pew Research Centre's Internet and American Life Project (2013) 'Tablet and E-reader Ownership Update' [online] Available at: http://www.pewinternet.org/2013/10/18/tablet-and-e-reader-ownership-update/. Accessed 9 February 2015
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The Tablet Book 2

Ana-Maria Raus

Tablet Technostories

The Academic Ingress

Keywords: tablet, technostory, fluidity, STS, media studies

Introduction

The rapid proliferation of digital devices is present across all levels of society, walks of life, and fields. One of the latest digital trends involves touch-tablets – computational devices equipped with a touch screen, highly portable, and hailed as a new type of device, rendering a novel experience. The academic environment is also influenced by these technological developments. The use of tablets in higher education is growing, and among students and scholars alike, tablets are becoming increasingly fashionable. In the US

there is a high adoption rate of the tablet in universities and schools with almost half of college graduates owning a tablet in 2013 (Zickuhr, 2013). Ownership in Europe is expected to follow the trend (Lomas, 2013). In some respects, the tablet could be seen as a possible new academic tool.

This paper starts from that premise, seeking to reveal the way tablets were used in an academic context, shortly after the device became available on the market. The aim here is to look at how academia and touch-tablets are intertwined and mutually configured, ultimately answering the following questions: in what way are tablets used by academics? And in what way can this usage add to a greater discussion of tablet experiences? An empirical case study is used to address these questions, a pilot initiative involving iPads and academics from Maastricht University (UM) in the Netherlands. The case study is time bound, and as such it portrays early academic experiences with a tablet device.

Less than a year after the iPad tablet was launched in April 2010, the Maastricht University iPad project was initiated in January 2011. The project was a pilot organized by several UM faculties and the UM Library, with the general aim of exploring how a mobile touch-tablet such as the iPad can support learning, education, and day-to-day activities within the university context (Interview: Vesseur, 2012). Eleven iPads were assigned to the Faculty of Arts and Social Sciences (FASoS) at UM, where the devices were offered through a competition open to all academic staff, PhD candidates and master's students.

At this faculty, the iPad Project was focused on finding out "in what way iPads could support education, research and operations management" (Annex I: Stoffels, 2012). Therefore, the faculty-wide competition was framed in

terms of "proposals that would have an added value from a didactical point of view. All proposals were assessed by the faculty IT-committee" (Annex I: Stoffels, 2012). From the total of eleven iPads available, six were assigned to academic staff, three to PhDs, and two to master's students, one of them being myself. One of the professors participating in the project contributed his own device, while one tablet was shared among three other professors. The accepted proposals focused on themes such as less paper, easier organization, mobile office, online surveys, digital archives, virtual libraries, and interactive and creative tools for education.

I interviewed eight of the academics involved in the pilot at FASoS., as well as the educational technologist from the university library who was involved with the organization and evaluation of the project. Additionally, three other participants offered their insights through email, together with the E-learning, IT, and education coordinator of the faculty, who offered guidance and support for all participants throughout the process.

The approach used for the interviews was an open and flexible conversation (Byrne, 2004), which would allow the interviewees to share their attitudes, views, tablet screens, and impressions of their experiences with the iPad. The idea behind these interviews was not to prove or disprove whether tablets are useful for academic activities, but to discover how a device such as the touch-tablet was used in academia at that point in time.

The interviews revealed nuances and layers of usage that transgressed clear categorizations. There was no single iPad experience, but instead many accounts that shared certain impressions, while diverging in others. Their experiences with the tablet can best be described as a landscape of expectations, wishes and dreams combined with practical hurdles and

physical objects – the landscape of touch-tablet usage in academia, in the early days of the tablet. It is this landscape of tablet experiences that provides the main focus of this paper.

To expose the tablet-usage landscape in detail, I use storytelling as a stylistic tool for representing personal experience with the tablet. These stories combine realistic elements with idealizations, and they offer the possibility of intertwining thoughts on past, present, and future iterations of the device as seen through the eyes of the interviewed academics. Because the stories are focused specifically on touch-enabled technologies, a more appropriate appellation would be technostories. By using technostories, there will be no claim that this case study is representative of the research world, but that does not mean it is not relevant for a growing discussion about how these kinds of technologies can be used in education and academia. Moreover, merely revealing common themes would only take the interviewees' accounts so far. It would limit the richness of their impressions, the interesting ambiguities, and the subtleties of meaning when using a tablet.

The technostories are in the same vein as the technobiographical approach used in Science and Technology Studies (STS) (Henwood et al., 2001; Ching and Vigdor, 2005; Brushwood-Rose, 2006; Nevejan, 2007). Henwood et al. (2001) propose a story-based perspective to technological experiences, by exploring the relationship between people and technologies through autobiographical accounts. The stories function as a platform for analyzing the usage of technologies, taking into consideration the contextual specificities of the different accounts. As a method for analyzing digital experiences, as well as the connection between online and offline aspects of these experiences, technobiographical works are reinforced by David Bell's (2001) argument that "cyberspace is created through the stories we

tell about it" (Kennedy, 2003). The stories contribute to the culture around the digital, together with technologies and the people experiencing and using them.

The same approach is used for the technostories, with the aim of preserving as many details and nuances of the scholars' accounts as possible. The biographical elements are not present, but the interviewees shared their personal iPad experiences with me, and I take the role of the narrator in relating their stories. Therefore, snippets of analysis and reflection will be woven together with the stories themselves, as well as some observations and my own theoretically informed reflections about the conversations. In this respect, storytelling is the best suited way to represent the iPad experiences as constructed in collaboration with the interlocutors (Clandinin and Connelly, 1994), resulting in technostories co-produced by myself and the interviewees.

As a narrator of these technostories, I emphasize the interviewees' account, but at the same time acknowledge the presence of my own observations, which add a layer of interpretation to the stories. Furthermore, one of the technostories will be my own experience with the device, as I was one of the UM iPad Project participants. My technostory, then, will be a technobiography, including my personal impressions and notes I took during the project as primary materials.

My involvement in the project itself has to be taken into account. As a participant in the pilot, my closeness to the project could be seen as hindering my analysis. At the same time, I supply the inside knowledge for advancing the conversations with the interviewees and for providing a detailed account of the context in which the project was initiated. Reflecting

on these issues, I choose a "playing the stranger" (Shapin and Schaffer, 1985) approach, with a "calculated and an informed suspension" (p. 6) of taken-for-granted beliefs and perceptions. In this way, I can make apparent the context in which the tablets were used, leading to a more informed appreciation of the results. I try to do justice, in this manner, to the stories of the participants with the overall result of offering an alternative view into how touch-enabled devices could be used in an academic context. But before presenting the stories themselves, I will outline the main patterns of usage and the main issues raised by the interviewees.

Bringing tablets and academics together

The UM iPad project was evaluated internally by the organizers and faculty coordinators, so I will not replicate a job well done here, but will summarize the main conclusions. The aspects identified in the official evaluation highlighted the user-friendliness of the device, as well as the advantages of a light, compact, beautiful device, with long battery life and suited for a paperless and mobile academic. The touch-tablet was also considered very useful in communication, collaboration, as well as teaching, and as a tool in the tutorial meetings. All in all, the project was judged to be successful (Annex I: Stoffels, 2012; Interview: Vesseur, 2012).

From the interviews, similar impressions emerged. The participants shared the feeling that overall, the touch-tablet was an interesting technology to experiment with, and most of them seemed content to have tested and played with the device. In most cases, the initial participants' goals when using the iPad, as outlined by them during the competition, were reached, be they a paper-free teacher, having a mobile office, archive, or digital library.

Balancing the positive aspects of using the device, the negative points that emerged from this experimental project were also addressed in the evaluation. Issues of synchronization across devices, limited storage capabilities, lack of permanent access to the Internet, or fewer functionalities when compared to a laptop were taken into account as well (Annex I: Stoffels, 2012).

Similarly to the evaluation, the interviewees maintained a critical attitude towards the tablet. Some acknowledged the cumbersome process of using the technology for the first time, the distraction it can create, the storage and connectivity limits it has, and the lack of specific apps, or sufficient support from the university ICT department. In addition, the iPad was not seen as a great device for academic work (i.e. research, papers, reports, etc.). The tablet user is rather "stuck in a consumption position" (Annex I: Post, 2012), which meant that the tablet is much more suited for consuming media and text, than for producing or typing. Besides these rather technical considerations, both positive and negative, the interviews revealed more nuanced experiences presented below as technostories.

Touch meets the visual – a performance

His world is a world of images. Working with iconography, or historical-visual materials, assistant professor Karel Vanhaesebrouck was enthusiastic about the iPad. He envisioned the potential of the tablet to store a visual archive, a portable database for the researcher to take along with him and to play with on the go. For him, the touch-tablet could make a "fantastic database for research, a good tool to construct a digital library." The touch aspect was important, because it allowed for "a virtual-physical contact with [images]," a visual-haptic combination. By being able to touch the virtual counterpart of the physical images, "you have the sense of having the

primary material present." The sense of closeness to the research material, even if visual, was enabled by tactility - the separation between the senses linked by the device.

The importance of the physical research material was emphasized through his own labeling as a 'book fanatic' and his preference for printing important emails or papers. He would like to relinquish paper to some extent, but at the same time, he prefers a physical manifestation of things that he cherishes. The iPad, though, might be the turning agent, as it can still offer a sense of physicality (enhanced by the sense of touch), with added mobility.

But despite the promises of this technology and the enthusiasm it brought, Vanhaesebrouck handed back his iPad not long after receiving it. For him, getting acquainted with the tool took more time than he could gain by using it. He acknowledged the inescapable situation, that in order to use the tablet to its full potential, one needs to invest time in it. In his case, the efficiency that could be obtained was not balanced out by the initial wasted moments of synching, installing, and finding out the best ways of using the device. Nevertheless, he would like to use the iPad for presenting visual material and recognized some advantages the device could have for his work.

Together with visual culture, theatricality is another research interest of his, therefore the performative potential of the tablet featured prominently in our discussion. With gestures to accompany his words, he believes in the positive aspects of presenting one's work with the touch-tablet: "I saw a colleague presenting his visual material and sliding his way through all his material, and it's beautiful to look at. It would be great, and it's also during a presentation, if you like the free-style presentation in which you hop from one fragment to the other, it would be great to use it." The 'sliding' through

the images conveyed an effortless and fluid handling of images, while the 'hopping' between different items would add visual effects and enrich the presentation. In turn, it would help reveal the richness of the research material to the intended audience.

The touch-tablet emerged a good performative tool not only because it can present data in an appealing way, but especially because it enacts "a simulation of the actual physical movements" of managing material and handling pictures. This adds to a convincing presentation and to the naturalness of the presenter 'performing' his or her research. In this sense, tablets could enable academics to communicate their work in a novel way.
(Karel Vanhaesebrouck, personal communication, April 4, 2012)

The digital academic

For the European Studies Director of Studies Patrick Bijsmans, the touch-tablet made a big difference towards reducing paper usage and being organizationally more efficient. Taking part in a variety of meetings, Professor Bijsmans noticed the advantage of the tablet as a support tool for discussing a common document or notes of previous meetings, and for helping the conversation in terms of clarifications and reaching agreements. The device becomes a reference point around which the meetings are structured or through which discussions are facilitated: "I don't print anything anymore, so that's really convenient. It's also convenient if you're in a meeting and someone wants to discuss something and no one has the paper there, or you want to refer to a previous meeting or another type of meeting you can quite easily just get the document on the screen and refer to it and explain what you've been doing there." The convenience comes from the ability to access a variety of documents on the spot, but also from the possibility to share the digital documents with the other participants at the meeting.

Furthermore, the atmosphere during meetings where a tablet is used instead of a laptop seemed different to the professor. Typing on the touch-tablet was not as intrusive as typing on a laptop – no ticking noise from pressing keys on the keyboard, and no hiding behind the laptop screen. Therefore "in a meeting with an iPad you notice that things are more open", an openness supported by less noise and more engagement. However, when it comes to typing 'proper' research, the laptop or PC are the tools of choice. The tablet is preferred for small tasks, like emailing and note-taking, and for travelling.

The sharing-enabling capabilities of the iPad were experienced by the professor at conferences and other networking events. Sending an email instead of exchanging business cards, or sharing papers and references as the discussion progressed were examples of how the tablet enables a different way of getting in touch with peers and of sharing knowledge. But the sharing possibilities, Bijsmans felt, were dimmed by the access people have to these technologies in general. Other scholars or students might not have a similar device, so sharing apps or certain formats is not possible.

The tablet, in many ways, was a duplicate of other objects in his office. The device was meant to be a replacement for paper, but it was also used as a second screen. In the case of paper, apps simulated the advantages of pen-and-paper note-taking and commenting, but digital: "GoodReader is a very nice app, as long as you have documents in PDF, that is, because you can make all kinds of comments in the document, and you can really work in the documents as if you're working on paper, so it's extremely, extremely easy." But the tablet was also a collection of life snippets for the professor, which one could guess by looking at the apps he had installed – apps for work, apps aimed at research, ones used for scheduling, writing,

taking notes, editing, or personal ones like newspaper-reading apps, music apps, and others. The relationship with the apps was interesting - "if you download one app first, that will probably be the app that stays with you", he said, revealing the affectionate relationship that can develop with this digital device.
(Patrick Bijsmans, personal communication, March 26, 2012)

Paperless teaching

Political Science Professor Nico Baakman was satisfied with the tablet and, when we spoke, he was in the middle of preparing another project using iPads – how tablets can be used as an educational toolkit for students in a tutorial session.

An Apple fan for the user experience focus of their technologies, he enjoyed using the iPad during the pilot project and beyond: "Reading from the iPad is a pleasure. It is as good as having a book, even better I think sometimes because you have all you want in there, it's handier." The added features were the possibility of highlighting phrases, translating words, or searching within the text for similar terms, all by simply holding one's finger on the respective word. This enhanced reading experience inspired his second iPad project.

The situation is reversed when it comes to writing or typing. At the beginning of his academic career, Baakman wrote by hand. With time, typing replaced handwriting. Nowadays, copy and paste digital options are even more commonplace. Technology disabled him in this respect, making him more dependent on the computer. Other processes were affected too, like looking for data and referencing. In the past he went to libraries to access books, but now digital tools seemed to make these activities easier.

The touch-tablet discontinued this trend, contributing to a loss of typing ability rather than improving it. The tactile interface was "a very handy way of operating a machine, but then you are disappointed by your own expectations because you cannot type. It works, but it's not great." Typing on the computer keyboard was much better than typing on the iPad, which had a small and hard-to-use keyboard feature.

The difference between the computer keyboard and the tablet keyboard was one of many with regards to the two devices. The iPad was also different in look and feel from books and archives, even if it was a replacement for such material objects. This signaled a distinct way of doing research and of gaining new knowledge, which the professor was aware of, especially when it came to how students find information nowadays. However, disseminating knowledge in the 'old-fashioned' way, through words and sentences was preferred for communicating his research results.
(Nico Baakman, personal communication, March 20, 2012)

It's nice, but…

PhD candidate Claudia Engelmann also wanted to use the iPad to consume less paper in her role of bachelor papers supervisor. The supervision process involves reading numerous drafts of student papers, and offering comments and advice. The touch-tablet was initially considered a good way to avoid the paper overload and to enhance the communication with the students. But even if the tablet was fun to experiment with, it also produced more work.

Managing various supervision tasks through the tablet minimized paper usage. The same was the case when attending conferences or trainings in different locations. It was nice to be able to relinquish printouts and to

be more mobile thanks to the iPad. The mobility features also allowed Claudia to use alternative locations for reading and emailing. The weight of the device made a big difference here.

However, the added value for her educational duties or her research work was minimal. Commenting on the bachelor drafts was difficult. Using a word-processor with a comments function on the iPad was not ideal, especially because, at the time, few apps were available geared towards these types of activities. The device slowly became superfluous: "A tablet as such does not make a lot of sense to me. The nice thing was you could also sit around on the sofa and surf a bit around, but you can't properly work, I have to write a lot and that's not working and just for surfing, it's not really worth it." The technology became in this case a device which was "nice to play with" but not useful in terms of enhancing teaching or research-related activities. The blend between work and leisure environments did not make the iPad experience more interesting or more pleasant, on the contrary.

Further issues with Internet access when travelling, the inferior writing and commenting capabilities as compared to a computer, finding a healthy posture when using the device (especially as it can be used in different locations), or the potential to get distracted rather than focused when using an iPad in meetings – all led to a rather skeptical position towards the device. Nevertheless, Claudia acknowledged the fact that she did not use many apps, and did not explore extensively enough the possibilities that the tablet can offer. Even so, for her, the device was not that different from a computer. The new device did not occupy a special, or a different space amongst the tools used for her academic activities.
(Claudia Engelmann, personal communication, April 3, 2012)

The many faces of mobility

For Professor of European Institutional Politics Thomas Christiansen, the tablet had a marginal value for his research activities. By using the iPhone before, he was already acquainted with the technology: the touch-screen, the app-system and the overall functioning of the device. He liked the iPad, but the line between the advantages and the downsides of the device was fuzzy.

The iPad was useful for him in some respects. It acted as a catalyst for discovering new digital research tools which might have gone unnoticed: "I discovered a few quite useful applications, which I use a lot now and which I probably wouldn't have even thought of if I didn't have the iPhone and the iPad. And actually they make much more sense for research in general than just for the iPad. The iPad is of marginal additional value, it's useful of course, but it is not groundbreaking." The tablet became a platform for experimenting with new software, which was then transferred into other devices, like the desktop computer or the laptop, but more importantly into Christiansen's research practices. In particular, referencing software for managing bibliographies, sharing documents and folders in a research team, or collecting web clippings were the new tools that these new technologies highlighted. But when it comes to using the new software tools, the professor predominantly used the desktop versions, which puts the tablet on a secondary place in terms of a hardware device.

He also saw some advantages in the mobility the tablet could offer. For one of his research projects, the tablet is used in the field for interviewing people remotely. However, he encountered some issues, like having Internet access on the device when traveling to a different country or continent. From this perspective, the efficiency of the tablet as a mobile device varied, and it was

instated only if certain conditions (Internet access in this case) were met. Furthermore, the danger of distraction was also acknowledged. The tablet could be used for work but also personal activities, like reading non-academic books or watching movies. This means that the tablet can easily move between the professional realm where focus is important, to the leisure sphere. This is a move that cannot be easily controlled by the user, which has the potential of disrupting concentration.

Christiansen's view for the future – to be as paperless as possible through digital devices such as the iPad – was combined with a preference for "things to look like they do when they are printed, to have pages, to have page numbers, and to have text, and not to have other fancy stuff." That was especially important for teaching, where physical books are still considered the norm in his field.
(Thomas Christiansen, personal communication, March 15, 2012)

Touching images

Archival research had undergone a number of changes triggered by digital media, argued PhD candidate Ruud Geven at the start of our conversation. He works with historical archives, and the tablet was the latest addition to his research practice, which involved visits at the archives in Maastricht. Dealing with archives was a time-consuming experience: selecting the right material and then photographing it for later reference. With the touch-tablet, dealing with archival work was improved, as handling the pictures became easier and faster.

Through the iPad, the researcher could have a portable digital library of the archived physical materials, which enhanced the management of his research corpora. Furthermore, the tablet functioned as a clone of the actual texts,

but easier to manipulate and control. The photographed material, seen and used through the iPad, became the actual text:

> *The real advantage of the iPad working with this material is that you have these photographs […], then it becomes really like a text, it becomes a piece of paper in front of you, and that's great. So you don't have to print it, and at the same time you can easily zoom in. This is becoming commonplace at the moment and it might not be remarkable, but for me it was ideal, because I was working with this laptop where I cannot zoom that fast, I have to make all sorts of movements to do that, and with the iPad it feels effortless, I have more control on what I'm doing. And I can also remain more focused, I don't have to discontinue all sorts of processes in my head just to scroll down.*

The one-to-one correspondence, from archival text to the image on the tablet, was an important aspect for his research. The sense of touch enabled a duplication of archival experiences - just like handling the real archives, the ability to handle their digital counterparts was enhanced by the tablet, and it contributed to the research process. Through the tactile features, the researcher was closer to his research object. Even more so: the ability to control the images, by zooming in with the touch of a finger, supported the thought processes while studying the material.

However, working with images on the iPad was not easy from the beginning. Geven tested a number of possibilities and searched for a suitable app for archiving photographs. "But nothing really worked," he admitted. There was no app specifically developed for his purposes, and the sync between different software was also problematic. In the end, the iPad was a useful

tool for managing the digitized archival material, but more functionality is needed still: "I think there is a lot of fuss about something that is highly portable and has touch capabilities, that's great, but I haven't seen the real promise yet." This did not mean future potential was not in sight. Although the iPad is just another device that researchers could use, its functionality can differ greatly depending on the apps and the way in which the tablet is used.

(Ruud Geven, personal communication, March 22, 2012)

"A bit the same, a bit different"

With research interests closely related to film, media, technology and semiotics, senior lecturer Jack Post was one of the initiators of the UM iPad Project, participating with his own iPad. His particular interest was in the flow of documents between digital devices, a flow which appeared to be hindered by certain issues: the cumbersome synchronization across different technologies, the lack of a filling system on the tablet itself which meant that there was no unified platform from which to read and manage documents, or the constraints of one account per device which did not allow multiple users.

The different problems highlighted the versatility of the technology, but also its ambiguity: "It's not one device, it's not one problem. It's a clustering of problems. And all simulating the interaction with the book." For the professor, the tablet represented an electronic simulation of a paper book, and therefore is a device that tries to replicate the way in which we use books; it is also a semi-replica of a computer, and even of a smartphone. When typing, the professor observed how the screen changes its function and becomes a keyboard. However, the change from image to keyboard is not clear, with the two functions blending with each other: "the ambiguity

of the touch screen, continuously changing between different functions, so on the one hand it's a screen that is communicating an image, at the same time it's an input device, merging the two functions." The ambiguity allows different meanings and interpretations with regards to how we classify the tablet: an electronic book-reading device, a touchscreen computer, a bigger smartphone, as well as the sum of all, a purpose-shifting hybrid.

More than that, he also reflected on the way tablet experiences connect to previous experiences we might have. Reading an e-book on the tablet is not easy because the layout changes depending on the book and on the software used to open it. The experience of reading a book is stretched and shifted through the touch-tablet. The professor considered that the iPad "is moving into the semantic field of the book," which reinforced the idea that this technology is capable of acquiring multiple meanings in different cases.

From another perspective, the tablet was seen as an oversized smartphone: "I would compare it [the iPad] with my mobile phone, they are more or less on the same level. So I do the same things as I do on the iPad because they are exactly the same. […] The first reaction I had when I bought the iPad and I pushed the button and the screen came up, I was really confusing it with my phone. It's too big! A big phone…" This offered yet another instance where the tablet has no fixed functionality, but its position is in between. "A bit the same, a bit different," this is how Post positioned the technology.

The professor also placed the iPad into a greater context of changes in academia and knowledge endeavours. The ways and means of doing research are different and education is changing, shifts that were considered to be

"far more fundamental than new devices." These changes were triggered by the printing press, Post explained, while further alterations ensued with the advent of the computer: "if [the iPad] is an extension of the computer, then it's a correction or an addition on the computer, or you can say it's totally different. But I think not, I think it's integrating into a landscape which is in general changing. You cannot separate the iPad from the other [technological developments]." The device can be seen as both a continuation of previous computational media, but concomitantly as something new, while being part of a larger network of technologies, a landscape of interconnected devices. **(Jack Post, personal communication, March 12, 2012)**

The answer to what problem?

European Studies master student Joris Korbee participated in the iPad Project because he had high expectations of the device. His project focused on tutorial sessions, where he believed the technology can be used to improve minute taking. Compared with a laptop, the iPad would not represent a physical barrier, but as he used the device more and more, Joris observed the emergence of other types of obstacles.

In terms of the physical aspects of the device, there was nothing wrong: it was light, portable, easy to share around the room between students. But the iPad also distracted them from the minutes-taking activity. So instead of allowing them to share and produce knowledge and information faster, the tablet slowed down the meeting. The technology disrupted the educational environment by bringing in entertainment and fun: "the iPad is a gadget, it's not yet a tool."

For Joris, the tablet has potential nonetheless: "the strength of the iPad lies in its intuitivity" which comes from the simplicity of using it and the small

learning curve needed to operate the device. No manual or instructions were needed, and the touch capabilities supported very well this intuitive aspect.

Yet in his tutorial groups the tablet functioned in a paradoxical manner. The students played with it, tried out different apps, and tried to take minutes, but typing did not work that well. Still, for sharing course information or lecture slides, the device was useful, and even easier to share than a laptop. The paradoxical nature of this technology was acknowledged as it became obvious to the students that even if the tablet was at the time hailed as bringing forward new and potent capabilities, it did not seem to excel at any of them: "It's nice for a thousand things, but not nice enough for one thing," he explained.

Joris believed that more discussion is needed on the ways in which the iPad could be used in education, and not so much on its technicalities (light, thin, long battery life), which for him highlighted the gadget side of the device, rather than its educational value. At the same time, he realized that sometimes there was no value to be found when using this technology: "I think you shouldn't look for a way to use state-of-the-art facilities like the iPad, but you should use them the other way around: make them the logical answer to problems you face, and not look for problems and then address them with an iPad."

(Joris Korbee, personal communication, April 12, 2012)

On the sides of a screen – a technobiography

I was one of the participants in the UM iPad project, for which I proposed research with a focus on creativity and education. More specifically, I wanted to look at the role the iPad can play in the process of brainstorming, and

in tutorial meetings for graduate students. I was enthusiastic to start working with the new "seductive digital fruit" (Boym, 2010) - that was the way I perceived the device even before using it. As soon as I received it, I wanted to turn it on and start experimenting immediately. Unfortunately, it was not as easy as that. The device needed a lot of customization before it could work.

When the initial installation was done, I accessed the App Store and tried a bit of everything, feeling like a child in the candy shop. I wanted to get an impression of the breadth of possibilities the tablet offers through these apps, so I experimented with a variety of them. However, the magical experience I was looking for was elusive, caught between walls of software: downloading apps, reading reviews of what makes similar apps perform better over others, making accounts to activate apps, reading privacy statements, agreeing to GPS localization, etc. Installing or updating the older apps became a weekly mantra, but not one that I enjoyed.

When using the tablet in my tutorial groups, I found it a great device for sharing information, for looking at a website or paper in a group, and for showcasing ideas and visuals. The tablet functioned as a common denominator for group work, as if we were sharing a piece of paper which everyone could see, everyone could discuss, with the added value of Internet access. All hurdled around the device, we had an interactive content holder, a repository of documents we were discussing, or a trigger for different ideas in the group. In this case its hybrid nature of in-between paper and computer played to our advantage. That was not always the case, and here is where the versatility of the device became both its greatest value and its greatest downfall. It worked well as trigger for discussions, but it was also a device soon forgotten when

the brainstorming evolved into a more concrete action plan for our next meeting, or even less so for collaborative writing.

To find creative ways of brainstorming in the group, I experimented with a number of apps, but at that moment in time the apps offering was still in development. However, I appreciated the simplicity and intuitiveness of basic apps such as the map, with the possibility of zooming in and out, controlling the degree of depth with just two fingers. It felt empowering and easy. Nowadays these aspects seem trivial and commonplace, but at the beginning it made me wonder how these simple movements will form my future expectations of maps, texts, images, or ideas. The potential of the tablet was felt already then, although due to its hybrid nature and versatility it is hard to pinpoint how a device that encompasses many other devices and multiple purposes can have a direct effect on the way we collaborate and brainstorm in academia.

The story of the technostories

From the stories above, a number of key themes can be fleshed-out. For some of the academics, the touch capability of the tablet was important for their overall experience with the device. One professor argued that touch was "nicer than having a mouse with you all the time, this is much easier, the easiness with which this goes is very nice" (Annex I: Bijsmans, 2012). The ease of use that touch enables advances the speed of use, but it also highlights the intuitive side of the device. The intuitiveness supports the knowledge creation process because manipulating the tablet does not hinder concentration and thought processes (Annex I: Geven, 2012).

The interactive capabilities of the tablet were highlighted by a few only, and when acknowledged it was in connection with future scholarly

communication and publishing trends. However, in one instance a clear use was made of the interactivity the tablet can offer. Professor Valentina Mazzucato (Annex I: 2012) describes her use of the iPad:

> *[W]e used it [the tablet] as an interactive tool to communicate with our respondents […]. We were collecting information on their social networks: who is important to them in terms of material, emotional and social support. We developed a name generator tool which gave us information on the name, sex and location of each person mentioned. After that we drew the network in terms of circles (men) and squares (women) with lines connecting them when they knew each other and a colour depending on where they were located geographically. We used the App Omnigraffle to draw the networks and then went to the respondents with the iPad to show them their network visually. The software allows people to move the shapes around, to add or delete shapes, etc. This way, we could interview people about their network by allowing them to shift relationships around, see if they forgot some, or check if we had understood correctly. Respondents enjoyed this exercise and it enhanced our communication with them, aside from the most important thing: it increased the quality of our data.*

Here, the sense of touch contributed to the interactivity of the device, which was useful for the researchers in two ways: as a communication tool and as a research instrument, playing a significant role for the quality of the research data. This example reinforces that argument that as a communication device, the iPad allows certain interactive features that increase the users' participation and engagement. But the way in which interactivity was used as a research instrument reveals, what at that point in

time was an unexpected potential for the interactive tablet – the potential to simulate different realities or networks, and to use the simulation as a guiding tool towards better research data.

Mobility aspects featured prominently across many of the participants' experiences. The possibility to carry the device with ease to meetings, conferences, or while travelling was seen by the majority of the Project participants as an advantage. But portability is also conducive of a more informal way of working: "you can sit in a chair and relax a little bit, you don't have to stand behind a desk and you can be much more mobile, you can basically sit wherever you want" (Annex I: Bijsmans, 2012). From this perspective, the tablet expands the working space of the academic. The desk is no longer the only working zone, but the train becomes a good spot to respond to emails or correct papers, or the armchair and even the bed become article reading havens. The expansion of the working space also increases the possibility that other types of 'spaces' will overlap. Family activities and entertainment, for example, are some of the areas that the tablet blends in. The device unites professional and personal settings.

But besides touch, interactivity, and mobility, there were a wide array of insights and thoughts after using the iPad. To better frame all these different experiences and to reflect on what these nuances mean with regards to using a tablet in general, I will compare the device with the Zimbabwe Bush Pump as analyzed by de Laet and Mol (2000). The comparison might seem unsuitable, but I want to show how the tablet is, just like the bush pump, a fluid object.

A fluid object is defined as "an object that isn't too rigorously bounded, that doesn't impose itself but tries to serve, that is adaptable, flexible,

and responsive" (de Laet and Mol, 2000, p. 226), being able to travel to 'unpredictable' places and variable over time. The lack of boundaries means the device is entangled on many levels: although a solid object, the pump is used in many different ways. It is adapted, repaired, and altered according to the people using it or the circumstances in which it is used. This leads to many identities or configurations that the object can take.

The touch-tablet shares with the bush pump this absence of sharp boundaries. In particular, the media tablet takes on multiple identities. It can be used as an Internet-browsing device, an e-reader, a multimedia platform, an interactive object, a note-taker, recorder, camera, or a video-conferencing device. Its identities multiply over time as designers develop further add-ons (for example the addition of two photocameras for the later generations of tablets). There is no one identity, not just one purpose for the tablet, but a convergence of technologies, which leads to a wide array of usage possibilities.

The idea of technological convergence is not new, and as many scholars have shown, it is important to look at this phenomenon not only in terms of old and new media colliding (Jenkins, 2006; Bolter and Grusin, 2000), or different channels of communication and texts coming together (Landow, 1997), but also from the perspective of various spaces of human activity coming together, in a combination of work and play (Holt and Perren, 2009), serious and casual, where "the virtual, social and physical world are colliding, merging and coordinating" (Rheingold, 2000). So media convergence impacts the way we consume media, bringing together at times contradictory worlds. The versatility of the tablet enables the device to be potentially useful for a variety of tasks, in different circumstances. This, however, does not mean it is useful all the time, or that for certain

actions other devices do not outperform the tablet. Choosing the iPad as an (academic) tool remains highly contextual. Nevertheless, the device offers a multiplicity of potential uses.

The Zimbabwean bush pump also shares certain characteristics with other water pumps, being similar, from some points of view, with some bucket pumps, and differing, from other perspectives, from other such devices – this web of similarities and differences gives the device a continuous aspect. Similarly, the iPad is positioned in the tablet world as not-a-computer and not-a-mobile-phone, yet it has characteristics that are similar to both PCs and smartphones. This framing makes the digital device as continuous as the bush pump is advocated to be. The tablet occupies a flexible position in-between other technologies – a fluid object suspended between desktops and mobile devices.

This in-betweenness of the tablet has its advantages as well as its disadvantages. The matter, however, is not black and white. Just like de Laet and Mol (2000) argue that for the bush pump one cannot talk about its success or its failure, but rather a fluid continuum between the two extremes, the same can be said of the tablet. The digital device can be seen as a failure in some cases, with its limited keyboard function that does not perform as well as a desktop keyboard, or the way the screen is lit up, as opposed to e-readers that work better against eye fatigue. In other situations, these features are not seen as impediments, while other features make it a useful device – the interactivity, the quality of the images, and so on.

The parallel does not hold up in all aspects. When it comes to the reparability of the devices, the bush pump is more transparent (in terms

of its structure and components) than tablets, and much easier to fix. Nevertheless, the touch-tablet can still be seen as a fluid device in terms of the absence of clear boundaries and the multiple identities that it can have, and its success or failure to address certain tasks that vary across contexts. The technostories reinforce this argument, as with each account a slightly different facet of using the tablet is showcased.

Taking a technostory approach to presenting this case study highlights the ambiguity and hybridity of the tablet as a device that can be used in many ways, has a number of different identities, and can adapt to various environments and circumstances. The comparison with the bush-pump further drives the point that tablets are fluid objects, which results in contradictory experiences. For the academics, the tablet was both fun, useful, and distracting and not really adding value. Nevertheless, the use of this technology showed how boundaries shift and change. Through the technostories, this fluidity was made apparent, offering an alternative view into the complex configurations that such devices are part of once they are included in our social ecosystems.

Afterword

This chapter, focusing on a technology which at that time saw its first adoptions in the academic space as well as the world at large, is permeated by a feeling of outdated-ness. The tablet has evolved in a short time span, together with its uses and apps. Its rapid versioning brought along different experiences just as much as different technological updates. Time-bound, the technostories might resonate less now than they did two or three years ago, but as such they highlight the special tensions between past and present that we have to confront when analyzing ever evolving technologies.

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Annex I

For the empirical part of this paper which focused on the UM iPad Project from 2011, I conducted nine interviews and I received further feedback by email from four other participants to the project. The majority of the respondents are affiliated with the Faculty of Arts and Social Sciences (FASoS). Below, there is a list in alphabetical order with details concerning interviewees' names, their department or field, and date of personal communication.

Interviews

Baakman, Nico (Dr.) – Political Science, FASoS – 20 March 2012
Bijsmans, Patrick (Dr.) – Political Science, FASoS – 26 March 2012
Christiansen, Thomas (Prof. Dr.) – Political Science, FASoS – 15 March 2012
Engelmann, Claudia (PhD candidate) – Political Science, FASoS – 3 April 2012
Geven, Ruud (PhD candidate) – History, FASoS – 22 March 2012
Korbee, Joris (MA student) – European Studies, FASoS – 12 April 2012
Post, Jack (Dr.) – Literature and Art, FASoS – 12 March 2012
Vanhaesebrouck, Karel (Dr.) – Literature and Art, FASoS – 4 April 2012
Vesseur, Antoinette (Drs.) – Educational Technologist, UM University Library – 27 March 2012

Feedback provided by email

Fronk, Elena (PhD candidate) – Literature and Art, FASoS – 19 March 2012
Mazzucato, Valentina (Prof. Dr.) – Technology and Society Studies, FASoS – 2 April 2012
Stoffels, Sjoerd (Drs.) – E-learning & IT & Education Coordinator, FASoS – various dates
Vink, Maarten (Dr.) – Political Science, FASoS – 2 April 2012

Author biography

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As an academic visitor at the Institute for Science, Innovation and Society (InSIS), Saïd Business School, Oxford University, Ana-Maria investigated practices of digital mapping of social controversies and the use of digital tools in social sciences. Ana-Maria also conducted research on interactivity and enhanced publications at the Royal Netherlands Academy of Arts and Sciences in Amsterdam, with the eHumanities group, which focuses on digital humanities.

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The Tablet Book

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The Tablet Book 3

Candi Miller

When Sally met Harry

A Fictocritique on the Use of Tablet Readers for Indigenous Knowledge Transfer

Keywords: Indigenous Knowledge; technological hegemony; folklore; San; marginalisation; ethnologically-informed interactive design

A Note on the Form

In this ficto-critique I am attempting to "allow the voice of the other to interrogate the voice of theory in such a way as to reveal its particularity and its partiality" (Gibbs, 2005). I embrace the irony that Harry, Sally and I are all 'other' in relation to the stakeholders in the proposed electronic folktales project. As Helen Flavell notes, "ficto-criticism's practice interrogates the violence of representation inherent in speaking for and about another" (2009, p.2).

In this piece I aim also to explore what post-modernist anthropologist, Michael Taussig claimed for his use of ficto-criticism, namely, an attempt "to duplicate in the writing something about the culture itself" (Taussig, interviewed by Eakin, 2001). San life is lived in dialogue, whether in the constant babble that emanates from bush camps, or in the exegesis that takes place after and sometimes during, storytelling. Furthermore, Indigenous Technologies research aims to discover the particular requirements of localized groups and to design solutions to meet their specific needs. For me this mirrors Gibbs' view of ficto-criticism as "an always singular and entirely tactical response to a particular set of problems - a very precise and local intervention, in other words" (ibid).

Additionally, as a novelist, it feels natural to come at truth via fiction. Also as an auto-ethnographer (http://www.candimiller.co.uk/research-project1.html), I acknowledge and wish to interrogate the fact that as a researcher I am implicated in what I am investigating.

While I relish writing an alternative to the tradition of impersonal scholarly writing, I respect academic conventions regarding intellectual property rights. I have therefore risked subverting the fictive conceit of a 'real' dialogue or script, by inserting in-line citation, albeit 'ghosted'.

As text must feature prominently in this piece, I've chosen to use script mode. It is closer to the oral form this project is concerned with, to the dense, intense, pervasive, dialogic approach of my research subjects, to any subject. It also permits me to use stage directions. I've deliberately focused on body language as part of the argument for producing San folktales in an audio-visual form. The San routinely use gesture as a form of communication, with or without verbal accompaniment. (See script). Jessica White, citing

Helen Flavell points out that "(t)he use of …. the body and personal details (in ficto-criticism) realizes a subjectivity that is quite different from the controlling academic subject's with their voice from on high'" (Flavell, 2009 cited in White 2010).

My characters are archetypes, as are those in San folktales. Sally chafes against 'the peremptory dictation of the institutional superego' (Gibbs, 2005), and Harry, who seems to be that 'superego' may, after all, 'want what Sally's (seemingly) having' (*When Harry Met Sally,* 1989).

Finally, all the characters are fictitious and any resemblance to actual persons, living or dead, is purely coincidental — with the exception of the author, Candi Miller.

Background

In a prestigious research institute in Africa, two academics meet for the first time to discuss the opportunities and challenges implicit in the digitisation of the oral folktales of the oldest aboriginal culture, that of the San people.

The protagonists know that the San have an African heritage of great antiquity; San artefacts have been radio-carbon dated to 44 000 years ago; scientists believe that bands of San living in the Kalahari desert today are the descendants of those hunter-gatherers. The San knowledge system was sustained exclusively orally until 30 years ago.

Harry and Sally are both sensitive to issues of appropriation and to the difficulties that bedevil social enterprise projects in Africa. Nevertheless, Sally feels honour-bound to help a group of San students who are interested in producing an e-book featuring their folktales, so "the world will hear our stories *told by us."*

Harry is a high-profile human computer interaction (HCI) researcher whose current focus is on interactive design for storytelling applications suited to rural Africa. A match made in academic heaven, you' d think. But Sally is not a disinterested academic; she's over-protective of the San, the "most victimized and brutalized people in the bloody history that is southern Africa." (Gordon, Robert J., 1992, p. 10) She questions the value of more than a century of research, which hasn't noticeably ameliorated their underclass status. She's wary that the San eTales project may become just another notch on Harry's professional bedpost.

INT: A busy academic's office, late one sunny South African afternoon. Books are stacked on a desk whose drawers can't quite close due to the computer-related paraphernalia spilling from them. An empty tin of condensed milk sits atop the book stack, sucking holes punched into the lid. There are two visitors' chairs, both occupied by enormous, well-worn rucksacks.

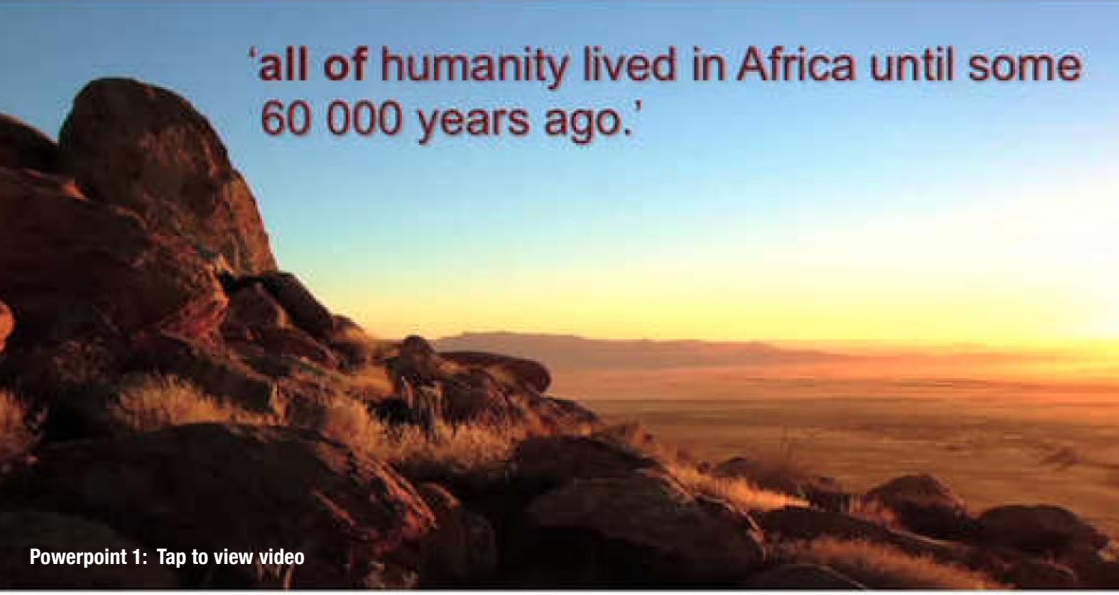
Sally: Thanks for seeing me; I know you're between field trips.

Harry: Ja, got a couple of Indigenous Technology projects on the go right now ... Here, let me move that stuff so you can sit down.

(He lifts the rucksacks as if they're helium-filled. She hovers over a dusty chair, wishing she hadn't worn white; dismayed that he's so good-looking and confident. He leans against his desk, towering above her, smiling politely down.)

So, your project: indigenous folktales into enhanced e-book form, huh? Tell me...

Sally: Well, umm… (*She touches her hair*) A group of computer-literate young San I've been working with…



Davis, W. *The Wayfinders: Why Ancient Wisdom matters in the Modern World.* (2009:8)

Harry: Lucky. I haven't worked with the San; other tribal groups but…

Sally: (*Sternly*) Actually, they are not a tribe. 'Tribe' implies hierarchy. The San are well known for their egalitarianism; much has been written about their consensual conf lict-resolution and communal decision-making.

Majorie Shostak (1990, p.6) notes how (*she draws quotation marks in the air*) "disputes were defused by discussions that went on long into the night, in which all points of view were expressed until a consensus was reached." Writing of the Ju|'hoan[1] people, Megan Biesele (1995, p.50) says "[t]hey are understood to be fiercely egalitarian by anthropologists" and Lorna Marshall (1961, p.231) wrote that: (*Sally closes her eyes, recites rhapsodically*) "The arduous hunting-gathering life would be insupportable for a single person or a single nuclear family without the companionship and cooperation of the larger group." And Katz et al, talking about one of the Bushmen or San groups, the Ju|'hoansi, says (*again she recites*) "they enjoy a communal solidarity that goes far beyond Western rhetoric about sharing and healing"

(KATZ, BIESELE & ST DENNIS, 1997, p.xi)

(Harry gapes at her. Has the woman memorized chapter and verse of the entire corpus of Bushman ethnography studies?)

Harry: That's a helluva memory you've got there. Mine's a sieve. And my anthropological knowledge's got gaps big enough to drive a bakkie[2] through.

(*There's an awkward silence. Sally feels her face heating up. She didn't mean to bludgeon him with quotes. They rattle around in her head like porcupine quills and when she's nervous, up they spring. He's looking at her like she's some kind of freak.*)

Sally: I'm sorry. I get carried away.

Harry: Ag-no. Passion's an advantage in our line of work, isn't it? (B*ut his arms fold across his broad chest*) So, how did you, living in England, get involved with the San?

Sally: I was born and brought up in Africa but left... (*Sally hesitates. Is it necessary to add 'during the Apartheid years'? Does she care if he thinks of her as a 'chicken-runner'?*) Umm, the Kalahari desert I visited some years after emigrating; I was writing a novel featuring a San girl and needed detail about her homeland.

After a bit of an off-road adventure involving a charging elephant and a massive veldfire racing towards my trailer full of petrol cans —

Harry: Ja, been there, done that; sand turns to glass from the heat, hey?

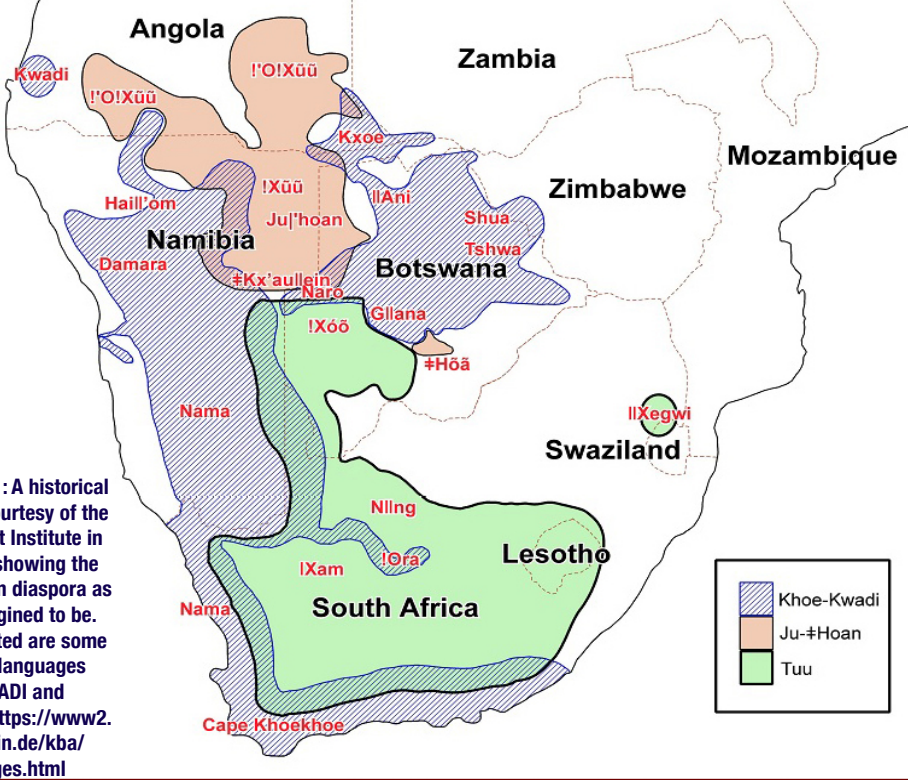


Figure 1: A historical map, courtesy of the Humbolt Institute in Berlin, showing the Khoesan diaspora as it's imagined to be. Also listed are some extinct languages like KWADI and !XAM. https://www2.hu-berlin.de/kba/languages.html

Tyres spin and you're going nowhere. Only thing to do is let some air out.

Sally: Yes, and quickly. (*He laughs.*) Anyway, I eventually found a group of (*she uses her fingers to trace inverted commas in the air*) "Bushmen", Ju|'hoansi, actually, still living in traditional huts off food they gathered from the veld…

Harry: Not easy to find San living like that nowadays, hey? (*He shifts weight from one well-scuffed boot to another.*) I haven't read your novels. I'll …

Sally: (*Defensively*) Just adventure stories; I hoped they'd advocate for San rights better than yet another academic article (*he snorts sympathetically*)

or feature story that might appear in the Sunday newspaper and go out in the cat litter on Monday.

Harry: Ja-ja, better impact. (*He uncrosses his arms*) Now, how can I help?

Sally: Well, um… (*she feels herself reddening again and hopes her neck hasn't gone blotchy*) … some kind of research partnership, perhaps?

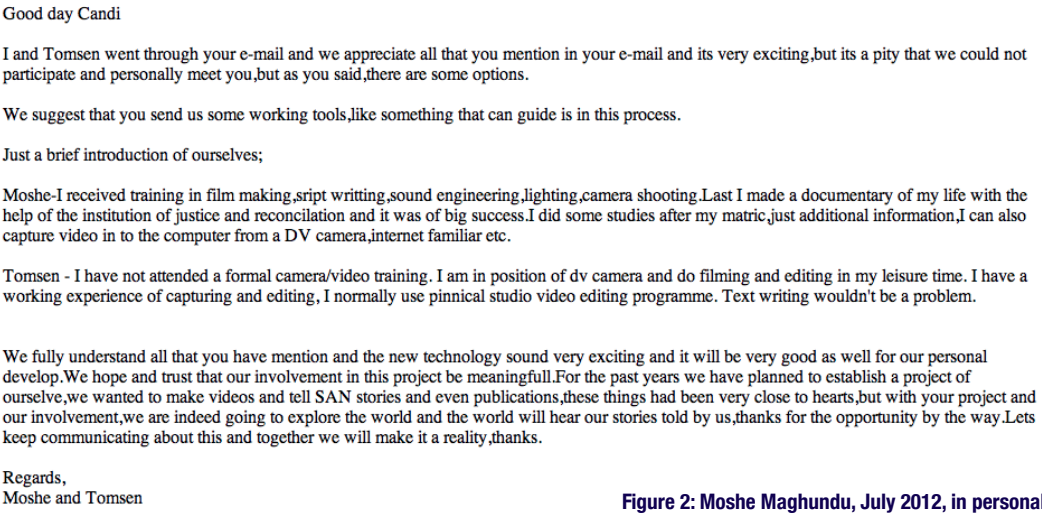
(He hopes his nod is non-committal. Why do people imagine he can make things better for their indigenous friends with a screen swipe, he wonders? But this supplicant has readymade San connections; that would give him a full house of ethnically-diverse research projects in southern Africa. But she's no academic prize, based as she is at a minor university. And she's a zealot; about as useful for scientific objectivity as a Facebook Like.

Still, it costs nothing to listen, and he likes the way her neck blushes.)

I'll be honest, I'm less interested in the research than I am in helping the San get a foothold in the digital world. (*He groans inwardly*) One of my San associates wrote in support of the e-tales idea, saying (*she quotes, unable to stop herself)* "we are indeed going to explore the world and the world will hear our stories told by us."

Harry: So, a training scheme you need to disguise as a research project hey? Shoot.

Sally: (*She's irked by his peremptoriness. She takes a deep breath*) Okay. Together with a group of interested San, I'd like to make an anthology of their folktales, an electronic anthology, accessible via tablet PCs or lo-spec



Good day Candi

I and Tomsen went through your e-mail and we appreciate all that you mention in your e-mail and its very exciting,but its a pity that we could not participate and personally meet you,but as you said,there are some options.

We suggest that you send us some working tools,like something that can guide is in this process.

Just a brief introduction of ourselves;

Moshe-I received training in film making,sript writting,sound engineering,lighting,camera shooting.Last I made a documentary of my life with the help of the institution of justice and reconcilation and it was of big success.I did some studies after my matric,just additional information,I can also capture video in to the computer from a DV camera,internet familiar etc.

Tomsen - I have not attended a formal camera/video training. I am in position of dv camera and do filming and editing in my leisure time. I have a working experience of capturing and editing, I normally use pinnical studio video editing programme. Text writing wouldn't be a problem.

We fully understand all that you have mention and the new technology sound very exciting and it will be very good as well for our personal develop.We hope and trust that our involvement in this project be meaningfull.For the past years we have planned to establish a project of ourselve,we wanted to make videos and tell SAN stories and even publications,these things had been very close to hearts,but with your project and our involvement,we are indeed going to explore the world and the world will hear our stories told by us,thanks for the opportunity by the way.Lets keep communicating about this and together we will make it a reality,thanks.

Regards,
Moshe and Tomsen

Figure 2: Moshe Maghundu, July 2012, in personal correspondence with Candi Miller, about a non-fictive e-tale project proposal.

mobile phones, so the San themselves can use it. It also needs to appeal to western audiences so the San have a chance of earning money from downloads.

Harry: (*He raises his eyebrows*) Big ask, for one app. design.

Sally: Not an app. That's too ambitious at this stage I think, in terms of collecting content anyway. Not that there isn't enough – the San, specifically the Ju|'hoansi, are referred to by Megan Biesele, as "perhaps the most fully described indigenous people in all of anthropology." We've analysed their rock art, (*she uses her fingers to count off categories in the canon*) digitised the Holy Grail of San studies,[3] the Bleek and Lloyd collection, gathered information about their plantlore, cosmology, ethnography, linguistics, their recorded history in all its the horrors: genocide, enslavement, the San as hunters and as the hunted…

Harry: Hunted?

Figure 3: Eland (Taurotragus oryx), the largest African antelope. Credit: Steve Garovie, photographer (https://www.flickr.com/photos/rainbirder/9516929865/sizes/o/in/photostream/

Sally: Oh yes. Around the 1900s one could still buy a license to shoot a bushman. It cost four hundred in the local currency if one intended to bag a 'Buschmann Frau'; double the price for shooting an eland.

(*He looks stunned*) One of these rate boards exists in a rural museum in Upington, South Africa. There's a shot of it in a film about the San called 'My Hunter's Heart'. Bushwomen are listed under a heading, 'Säugethiere', German circa 1900s for 'Mammals', I believe. (*He's frowning and thin-lipped. She changes the subject.*) Erm, as you can imagine, the app would be a lifetime's work and couldn't contain only stakeholder-generated content. So we're starting with what another of my San associates calls "Chapter One",

Figure 4: Chapter 1

an enhanced e-book. I propose to convene a San editorial committee and get funding for equipment so they can go into their communities and film oral storytelling. I'll also need money for training so they can produce an anthology of tales they have chosen.

Harry: Produce how?

Sally: Well, they might use iAuthor or Inkling Habitat. The first programme's easier to work with; it's intuitive…

Harry: (*Snaps*) Intuitive to whom?

Sally: Well, um, to me…to them … (*she feels her neck begin to blotch*)

Harry: Information and Communication Technology, ICT, and its organisational and operating systems are underpinned by Western ways.

Sally: (*Icy-toned*) And you're implying that digitally-deprived San cannot learn to operate an iPad?

Harry: Not at all. I'm sure they can, and have already – unfortunately.

Sally: (*She grips the edge of her chair*) UNFORTUNATELY ?

Harry: (*He holds up a hand*) Now wait just a bit. Consider: embedded in computerised devices and ICT design processes are specific logics and literacies derived from the culture in which they are designed. That is (*he points at her then at himself*) our ways to recognize, organize and communicate about aspects of the world. Additionally, there is cultural ideology inscribed in the way we interface with devices like tablets. For example, the grabber on Macs, a white-gloved hand, which some suggest was inspired by Mickey Mouse (JONES, 2011, p.237) A cultural icon familiar to a certain Disney-generation, but what does it signify for others? And what about its alleged racist overtones?

Sally: (*Mollified*) You mean the trademark white gloves of blacked up minstrels?

Harry: Ja. Or think about the curled up page corner on electronic readers. Why does an e-reader have to ape a book?[4] (*He holds her gaze and his tone softens*) We find that gestural interfaces with new media are increasingly commonplace and increasingly are embedded in technology offered to fragile indigenous communities as a way to curate, represent and disseminate their culture. There is a real danger that such technologies project the epistemologies and ontologies of outsiders at the expense of the knowledge systems of the vulnerable society.

Sally: I understand. And one could see the San as vulnerable. Most have largely abandoned their traditional hunter-gatherer lifestyles due to harassment or

forced dislocation. Over time they've lost land to settler groups both black and white, to game lodges and parks boards, to governments at the behest of mining companies, and lately, in designated San homelands like Nyae Nyae in Namibia, they've lost their bush food supplies as the herds of invading pastoralists' trample everything. It's said that hunted meat is now sold instead of being traditionally shared, and beer-drinking is more popular than trance dancing. (KATZ, BIESELE AND ST DENNIS, 1989.)

Harry: Is alcohol abuse a problem?

Sally: In some areas, like |Kae|kae, yes. Katz and his co-researchers reported from there that when beer- brewing[5] ingredients were available, they'd daily see a straggle of Ju|'hoansi stumbling home from one of the Herero settlers' homesteads. I don't know what the current situation is like. People are aware of the ill-effects of alcohol; they feel it increases the level of violence in their community – "people get angry and fight"– (XUMI N!A'AN, IN K ATZ, BIESELE & ST DENNIS, 1989, p.96) Of concern is the fact that shebeen-owners are now also the suppliers of mobile phone- and tablet reader-charging facilities. They are the ones who can afford the generators.

Harry: I see the problem; compounded by the fact it takes nine hours or so to charge a tablet reader using a solar-power/battery arrangement, provided others don't drain the power for lights. Mobile phones might be a better option, but the lo-spec ones people can afford have limited video capability. And ownership's not high in rural areas.

Sally: Some San have relocated to urban areas, for example the Omaheke townships in Namibia. Here there are people who don't speak their

San mother tongue, or, they speak it poorly. They have more chance of accessing a mobile phone. These San say they have never heard a folktale told by their people. They've heard their people are renowned healers but they've never seen a trance dance. (PRATCHETT, L. 2011, PERS. COMM.)

Harry: Well…

Sally: (*Interrupts*) The point I'm trying to make – apologies for the circuitous route – is that despite socio-economic problems, I'm optimistic for San culture; I think the e-book could be part of a solution. (She closes her eyes and recites) "Many 'vanishing' or even 'vanished' people thrive today as they re-create their traditional wisdom.' (KATZ, BIESELE AND ST DENNIS. 1989, p.159)

(*Harry decides he might come to enjoy her ardour.*)

Harry: Nice, but you still need to ensure compatibility of device and local cultural practices.

Sally: Of course, but for that (*she flashes an ingratiating look*) I'll need an indigenous knowledge HCI specialist.

Harry: (*Smiling.*) Your strategy is showing. (*In a less jocular tone*) But ja, there are precedents, projects launched to extend or preserve Africa's so-called 'Indigenous Knowledge', digitally. We've used a range of tools, from Web 2.0 to Geographic Information Systems and 3D visualization. Some archive aspects of knowledge or language, others aim to support applying indigenous people's practices to conservation and environmental

stewardship. Liebenberg et al. presented a good paper on this in Osaka in 1998. Then there's stuff on weather prediction, the innovation of new pharmaceuticals, Alberts, Khalala and Molefe, 2011, I think… I haven't got your memory. (*She blushes*) Other digital tools map places to establish land rights where those have been eroded. Ja, the digital transformation of San folktales suggests IK-design possibilities. But I can't stress enough how sensitive the researcher needs to be. Muwanga-Zake says "ICT is instrumental and held as responsible for inserting many Western ways of constructing and disseminating knowledge into African Indigenous Knowledge Systems." (2010, p.69) I say, at the *expense* of African Indigenous Knowledge Systems.

Sally: (*Teasing tone.*) Good quote, and I take your point. (*She leans back.*) Now let's say, for example, that careful research shows that in terms of content design, rather than the codex system, the San favour interacting with something that looks more like a landscape – the kind of visualization one finds in digital games. Could you design…?

Harry: Now you're talking my language. The Aussies developed something like that to digitally represent Aboriginal Songlines. They created a virtual Outback, mapping the cultural heritage landscape including ancient rock art sites, by using imported satellite based geo-spatial data. Then they embedded a range of relevant objects for users to interact with: 3-D fauna and flora, sound, animations, layers of narrative. Hang on, I've got the paper here somewhere: (*He swings round and scrabbles through a pile of papers on his desk, triumphantly extracts one, kicks the chair out from his desk, sits, and begins to read:*)

"These narratives consist of the network of Songlines that traverse the

country and reinforce Aboriginal knowledge practices. At any one location in the landscape the user may be able to access information from any number of Songlines, which offer different perspectives on what exists in that place, who can be in that place, what activities can be done in that place, how that place came to be, what needs to be done to maintain that place, the ownership of that place, and many other deep and subtle nuances of Aboriginal knowledge." (PUMPA & WYELD, 2006, p.241)

Sally: Impressive, but San ontologies and epistemologies won't mirror those of the Australian aborigines.

Harry: That's why Indigenous Knowledge researchers like to situate the design locally, to co-create with stakeholders.

Sally: (*A bit patronizing, she thinks.*) Erm, Gayatri Spivak (1999, p.351) admittedly on the subject of literary evaluation, argues that a different standard "necessarily provisional, can emerge if we work at the (im) possible perspective of the native informant as a reminder of alter-ity." Do you think a different standard of HCI evaluation can emerge if you manage, somehow, to see tablet readers and other hi-tech devices from an indigenous knowledge holder's perspective?

Harry: (*With a too-tight smile*) A point I always make in my funding bids. And it's that pig-in-muck place where my research and my funder's objectives coalesce.

Sally: (*Smug, she decides.*) Fortunate, given your, um, limitations? (*He raises an offended eyebrow but her quills are up.*) What Michael Wessels (2010,

p.35) calls the 'cultural, linguistic and historical specificity' of the tools at your interpretative disposal?

Harry: (*Flushing red under his tan*) Ja-well, we are all what our experience has made us.

Sally: (*Arch*) Biased?

Harry: Of course! (*His gestures implicates her. She's taken aback.*) Guilty white South African?

(He leans far forward, his long torso bringing his face closer to hers. She won't draw back. She focuses on his unusual eye-colour and a line from 'Burger's Daughter' comes to her: "Eyeballs of agate in which flood and volcanic cataclysms are traced" (1979, p.233). Lions have eyes like that, she thinks. She breathes out only when he pulls back.)

Here's one quote I do always remember because it's burned into my brain: Moran, 2009, page 116, proposes that people like us have "the urge to restituitively acknowledge the injustices of the colonial past."

(She feels ashamed. Perhaps he's more than the sum of his Afrikaner, scientist parts.)

Sally: You're right, Moran's right. I'm sorry for being rude. (*He nods acceptance as his high colour begins to recede.*) It's this role of interlocutor for 'the other' I find uncomfortable. Over my shoulder I hear Foucault (1972, p.50) asking his killer-question: "{F}rom whom … does {s}he receive… the presumption that what {s}he says is true?"

Harry: (*Shrugs*) What can we do but be as self-reflexive as possible? (*She murmurs agreement*) Digital technology's unstoppable; more even than those vast migrations of springbok that used to cross San land. Eventually ICT will vault fences the springbok couldn't.

Sally: (*Pleased by the metaphor*) All the more reason to provide the San with the digital means to present their own folktales.[6] There's a native American artist and writer whose work I admire and take heart from — Hang on … (*she reaches into her bag for her iPad*) Candice Hopkins, 'Making Things our Own' (2006, p.342): (*She reads as if sharing a treasure. He notes only that Ms Mega-memory uses an aide-memoir, after all.*)

"Storytellers in indigenous communities are continually embracing new materials and technologies, including video and digital media. I would suggest that this shift does not threaten storytelling traditions in these communities but is merely a continuation of what aboriginal people have been doing from time immemorial: making things our own."

(*She snaps the cover shut and looks up*) Already with the e-tales project idea there is evidence of this. The San I trialled the pilot with, suggested there be San-language to San-language transcriptions of the stories, which, to the best of my knowledge, is a first in a San folktale anthology. The group was particularly keen on creating a resource that would enable them to learn one another's languages.

Harry: Really? Nascent nation building, hey? (*She's relieved to hear less hostility in his tone.)* How many San-related language groups are there, by the way?

Sally: Well, there are about 30 so-called 'Khoesan languages', that is languages

spoken by the former hunter- gatherers or by their pastoralist neighbours. Of those, I'm told at least 20 are language varieties spoken by different San groups,[7] some critically endangered. Many other languages are thought to already be extinct.[8] (*Harry winces*) I'm not aware of any San-language to Khoesan language translations of the stories; plenty of translations and transcriptions into western or Asian languages, though.

Harry: It's that old story of privileging reading-writing literacy.

Sally: Paper people's hegemony. (*Harry's involuntary 'huh' makes her giggle.*) A label given to the anthropologists who wrote 'Healing Makes our Hearts Happy', by the late Tshao Matze, a healer and advocate for the reclamation of the Ju|'hoan land-base in Botswana.

Harry: (*Amused*) Paper people? Eina[9] Not an example of the San's sense of irony, I suppose?

Sally: (*Smiles*) Not in this instance. The healer tasked them as 'paper people' with sending a letter to the Botswana government on his behalf, saying they needed their land back so they could feed themselves. Richard Katz explains that Xumi N!a'an, an elder, had attended government meetings with rural people including the Ju|'hoansi, and was left feeling powerless and unheard. He said that 'words, to become powerful, must now also be written down,' (KATZ, BIESELE, ST DENNIS, 1997, p.7)

Harry: A shame, when people are skilled in other literacies – oratory, or reading the sand.

Sally: Isn't it... (*Shaking her head, then tilting it to one side. He notices the graceful*

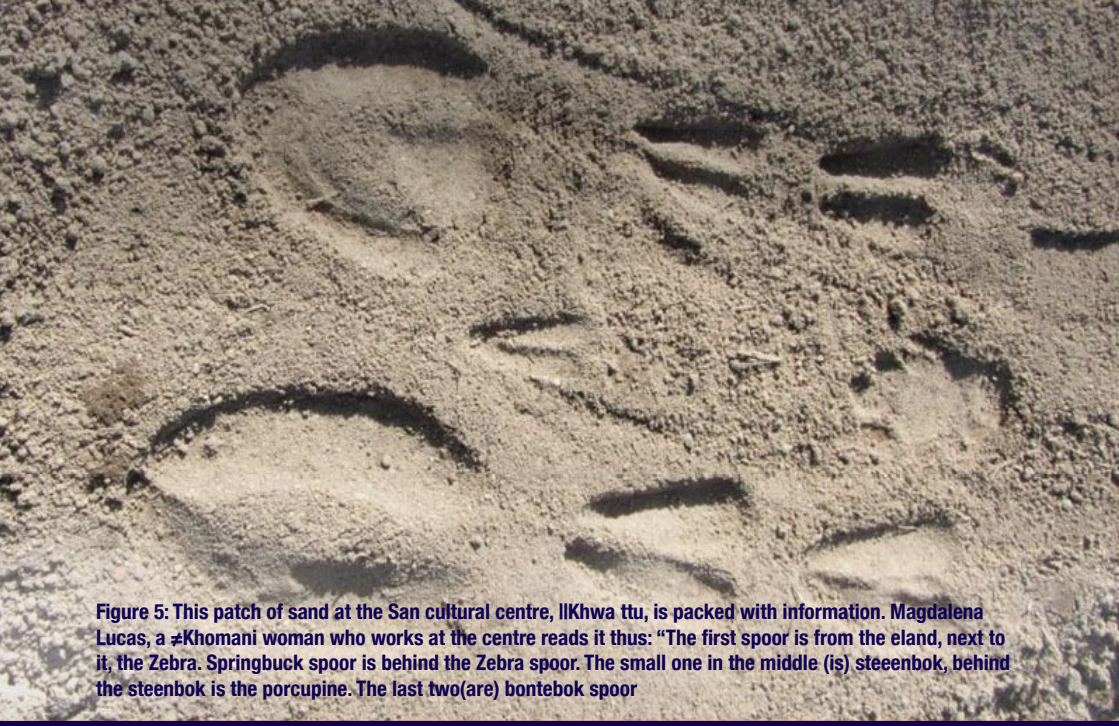


Figure 5: This patch of sand at the San cultural centre, ǁKhwa ttu, is packed with information. Magdalena Lucas, a ≠Khomani woman who works at the centre reads it thus: "The first spoor is from the eland, next to it, the Zebra. Springbuck spoor is behind the Zebra spoor. The small one in the middle (is) steeenbok, behind the steenbok is the porcupine. The last two(are) bontebok spoor

curve of her neck.) On a lighter note, I heard of one woman who read a Kalahari pathway like a gossip column. So-and-so walked here yesterday. He was with N≠aisa, not his wife, but old |Twi Beard's…

Harry: (*Chortles*) Well, there can be the equivalent of a gossip column in the e-book. A kind of backdoor, access restricted to stakeholders. Here they interact with the content in private, via their mobile phones.

Sally: (*Beaming*) A virtual campfire!

Harry: Ja, nice. But if they want to write instead of just use voice messaging, the notation used to represent the click-consonants will present a challenge.

Sally: Or an opportunity to adapt a standard keyboard?

Harry: There's KALQ, designed for thumb texters. It can be used on touch

screen devices too for faster typing. But I'd be more interested in studying some of the extra-linguistic gestures of the San that may be more intuitive for touch screen interaction.

Sally: Speaking of extra-linguistic gestures, I had an interesting email from an African/Khoesan linguistic scholar … let's see if I can find it. (*Taps open her mail and scrolls down*) Here. We were messaging about how important gesture can be in learning a new language. As you can imagine, interpreting certain gestures, be it for an animal, a way of hunting, or even for a mobile phone, aids comprehension; one associates the foreign sound, or word, with a common or known gesture. My correspondent, Lee Pratchett[10], gave this Ju|'hoan example: (*she reads from the email*) "If I asked you 'where is my rope-rock' you'd think I was slightly crazy" (She looks up to see Harry looking bemused) "But if I hold my thumb and little finger to my mouth and ear, in a way that suggests to most of the world "phone" whilst I say rope-rock, you'll" …

Harry: 'Pick up?'

Sally: (*Suppressing laughter*) Not punny.

Harry: (*He pulls a face that sabotages the perfect proportions of his face. Sally finds it appealing and looks away quickly. He's crestfallen.*) Ag-sorry. So, er, they don't say 'cell' or 'phone' or something like that?

Sally: No. It's rock-rope. Actually, the word 'rope' comes from the word for a plant used to make rope, so it comes out as … hang on, I haven't memorized it… (*"Yet" he smiles to himself while she reads carefully from the screen*) 'Sanseviera aethiopica-rock'. A particular kind of rope, then, intricately

encoded in the culture of the language, in the landscape. But grasp the gesture and you'll learn how to say 'phone'. I'm guessing that rope alludes to phone cords and rock refers to those old mobiles we call 'bricks'. (*She begins to laugh*)

Harry: (*Mock finger-wagging*) Okay, but I still say there are ICT logics that are not culturally universal. ICT's based on positivism so learning's seen as a conditioned response. Indigenous Africans take knowing as socially constructed. (MUWANGA-ZAKE, 2010)

Sally: Of course. (*She leans forward.*) The point I really wanted to make was one Lee Pratchett mentioned: it's hugely important to these people that their language can deal with the realities of the modern world. In one of my favourite anthropology books called 'Women Like Meat', there's another cool example of this facility for making up new words to fit new situations. 'N!áukxui' is the Ju|'hoan word for it, by the way.

Harry: (*Exaggerating his South African English accent*) Ah big yaws?[11]

Sally: (*Smiles broadly*) Okay, touché-teasing. Gônna! (*Harry laughs out loud at her Afrikaans-slang riposte*) No-really, I haven't heard that expression since I left South Africa! (*She shakes her head*) Now, where was I? (*She looks down at her screen thinking what fun it might be to work with someone she shares a cultural history with.*) The Ju|'hoan word is 'N!áukxui' – apologies for my pronunciation. I haven't mastered the clicks. Megan Biesele writes (1993, p.24) that this "process produced words like 'iguana fingers' for fork…"

Harry: I can't wait to discover the word and gesture they come up with for a tablet reader.

Sally: (*Giggles*) Me too! Of course, gesture can also encode what is not said, like gesturing the time of day something might happen or someone might come via an arm pointing to where the sun is in the sky.

Harry: That's interesting! So does the angle of the arm indicate the height of the sun, or is it about the context – sky, sun, maybe shadow on the sand?

Sally: Lee writes that because context is more important than syntax in Ju|'hoan storytelling, the gesture would be understood even if the words are absent.

Harry: Nice soundbite. Ask him if we can use it in a bid. (*She widens her eyes. Did he just say 'we' and ' bid'? She nods, casually, she hopes.*) Ja. I can see the advantage of having video footage. But then there's the whole question of whose eye one should look through… the lens of an alien interlocutor, etc.

Sally: (*Eagerly*) Footage will be shot by non-professional San camera operators so I see this as an opportunity to explore with stakeholders any oral-to-digital compromises they perceive. (*She reopens her iPad*) Back to "Making Things Our Own." Hopkins mentions an Inuit carver and film-maker who was "first drawn to the medium (*of video*) because of the similarities that it shared with Inuit oral traditions" (2006, p.342). Hopkins is a native American artist and curator and she describes the film work as "creatively depicting Inuit life … in much the same way in which Inuit life has been represented and experienced within Inuit communities since time immemorial" (ibid).

Harry: Send me the link if you don't mind. And are you aware of the work of Nicola Bidwell et al with traditional healers in Namibia? (*She shakes her head*). The limitations of video as a means of passing on plantlore, emerged.

Participants in the research "often reported that the content of clips incompletely depicted the knowledge they wanted to present." Factors like the absence of sensory data, de- contextualisation from physical and social environment, etc. If storytelling is not dependent upon location this may not present a perceptual problem for native users.

Sally: Perhaps not, but I anticipate other problems peculiar to oral storytelling. For example, electronic fossilization of a narrative form that's by nature, protean. Over generations folktales change to reflect the values of the society they are told in. They change within minutes or miles to reflect the style of another storyteller. Biesele believes that this dynamic feeds the form. "(S)pecific storytellers now, as in the past, have done cultural work appropriate to their times and crucial to the continuation of the culture" (1995a, p.8). (*She looks down at her iPad*) John Foley[12] (2005, p.233) says that our habit of converting performances into texts is "nothing less radical than converting living species into museum exhibits."

Harry: The audio-visual and interactive nature of an enhanced e-book should mitigate against that to some extent. And San editors could regularly update the content, allowing participatory curation.

Sally: What is that?

Harry: A bit like citizen journalism. The material comes from grassroots level. Distribute some digital video cameras and ask those with Internet access to send new recordings they've made in their communities, to the editors.

Sally: I like it, but it's going to need so much funding … soooo many aspects to this. (*She looks so forlorn he wants to reach out to touch her hand. Ringless,*

he notices.) And unless we can ensure that the stakeholders have access to the e-book, the whole thing's pointless. How do we do that, even with generous funding?

Harry: Technological marginalization of indigenous people is a big issue. And it's not only cost, lack of electricity or Internet connectivity that are problems. In the desert, tablet PCs are short-lived – the chargers corrode in the heat. (*She sighs*) However, when remote area dwellers do have access to tablet PCs, chances are they'd be used more cost-effectively than we in the West use them.

Sally: What do you mean?

Harry: Use would be communal. Take the Audio Repository system designed by Bidwell and Siya (2013) for rural Xhosa-speakers in an area where literacy is low. Here the problem wasn't just connectivity, it was about community members who live a day's walk from one another, unable to get governance news from the headman or social news from distant friends and relatives. The audio repository enables users to deposit and share voice files on a communal tablet, recorded via their own cell-phones or directly onto the tablet when passing through the headman's kraal. You may well be able to create a similar situation in San communities, users without mobile phones going to a central point to view the eBook and leaving comment.

Sally: That would square with traditional San values regarding the sharing of resources. Also, (*perking up*) a kind of exegesis could take place around every story, recorded and uploaded or not, and go some way to facilitating audience interaction – critique and banter is commonplace in peer-group story-telling sessions.

Video 2: Storyteller, Itibitseng Motsokwe.[13] (Tap to view video)

Harry: Sounds like a scene from a pub or round a braai.[14]

Sally: (*Laughs*) But the stories are much better.

Harry: I bet.

Sally: Think female super heroes, like G!kon||'amdima, the Beautiful Elephant Girl, roasted and eaten by her jealous brother-in-law, resurrected from a drop of blood by her canny grandmother, reunited with her daughter. Rife with metaphor, though whether these are signifiers for the San too, is unclear. Some tales are ribald or scatological, like the one about Pisiboro[15] who defecates on a python, gets his balls bitten (Harry begins to laugh) they swell to boulder-size and gouge out what become the dry river beds and water holes of the Kalahari as he tries to cool them.

Harry: Imagine the film of that one.

Sally: (*Laughing*) Noooo. Erm, just one more worry I'd like to air at this stage.

Harry: Shoot. (*Sally notes she no longer finds the expression irritating.*)

Sally: It's about the Intellectual Property Rights that reside in any e-book. Obviously the San get the royalties and divide them up as they see fit, but what effect, what consequences does this transformation of "knowledge from commonwealth to commodifiable" have? (BIDWELL AND MALELWA, 2014)

Harry: Another question that will need researching. But on the bright side, IK proprietary systems can be more flexible than their Western counterparts and they are less reliant for sustainability on profit-making (EMEAGWALI, 2003).

Sally: (*looking at her watch, glancing up nervously at him)* Well, I suppose the next thing to consider is whether or not we have a future together… *(she doesn't blush*). I mean, working on this project.

Harry: (*Leans forward, bringing his face closer to hers again. He's smiling broadly.)* You bet! It's the project I've been waiting for. This kind of science/ethnographic collaboration is invaluable. (*Sally's having trouble concentrating on his words. She sees them sitting around a campfire, sipping coffee made with condensed milk. Overhead, stars fizz in the infinite Kalahari sky.*) You see, Indigenous Knowledge technologies doesn't just aim to foster cultural preservation and economic and educational development for marginal

groups. Shifting the focus onto communication practices and meanings, onto indigenous ontologies, widens the scope for HCI design precisely because of the diverse and unique knowledge ecologies of indigenous communities.

(*She gives herself a mental shake. Harry's keen, he's capable, he's a hunk, but is he the one? She's read Muwanga–Zake too and the part she remembers is: "The author has observed that failure to reveal underlying intentions have sometimes created animosity against new research projects…" MUWANGA-ZAKE, 2010, p.71. What's that respect term the Ju|'hoan use for lion? 'Westerners'. Harry would like that joke, she thinks.*

Harry's still talking, bossing the air with his finger.)

Local knowledge and community participation in the design process of tablets and their content could result in novel ways to interface with digital devices. Ja-no, this project might lead to new HCI design paradigms.

Sally: (*reaching for her bag.*) Wow! And I was worried about the IPR in one little e-book.

Harry: (*Big, bluff laugh.*) It can be sorted, believe me. So where to from here? A drink? You got time for dinner?

Sally: (*standing up, offering her hand to be shaken*) Thank you, no. I'm grateful for your time and advice. I'll be in touch.

Harry: (*Stands up quickly, looking confused, deflated.*) Er… okay… Listen, can I have your…

Sally's quick to leave the room. Looking back she sees him gesturing frantically, thumb and little finger to his ear and mouth. 'Rock-rope number', he's mouthing at her. She laughs. He's cute, is Harry.

Notes

1. "'Ju|'hoan' meaning 'real or ordinary people' is the name the people previously called !Kung in anthropological literature use for themselves." (Biesele, 1995, p.70).
2. Bakkie: a light motor truck with a cabin and open back for conveying goods, animals or persons (Branford, J & W. 1991, p. 18).
3. "In the opinion of archaeologist and rock art researcher, David Lewis-Williams, "The Bleek and Lloyd Collection is surely the most amazing ethnographic source in the world. Nothing comparable preceded it, and nothing like it has been compiled since." (Lewis-Williams, 2007, p.180). http://esaach.org.za/index.php?title=Bleek_and_Lloyd_Collection.Accessed 29-10-2013.
4. "In a keynote address on e-books at a Higher Education Academy meeting in the UK, July 2013, Dr Caroline Bassett said that "the cultural imaginary of the book remains book-like." She referred to terms like the iBookshelf, the iBook, the paper white Kindle and pointed out that the devices indicate a corporate realm of ownership – the Apple icon stamped on the metal covers of an iPad, for example.
5. |Kaece China in 'Healing Makes our Hearts Happy', 1997, p.95. The authors, Katz, Biesele and St Dennis, observe that !xari, homebrew, is made regularly only by the Tswana and Herero peoples, both colonizers of San territory. "They are the only ones who can afford non-local ingredients … They brew it not only for their own consumption, but also for sale to the Ju|'hoansi, thus turning this !xari into a weapon of sociopolitical oppression."
6. "…provide the San with the digital means to present their own folktales."

In relation to this the author notes Katz, Biesele and St Dennis: "It is all too easy for literate and privileged outsiders to come up with an ambitious plan for a communication project and carry it along with insensitive enthusiasm, missing the fact that the local collaborators' nod of agreement may be one of bemusement or conventional politeness." *Healing Makes Our Hearts Happy:* 1997.

7. For a guide to the notation and some basic San click-consonants, please refer to the slide show.

8. Click on Audio link on the Britannica page for recordings of some San languages: http://www.britannica.com/EBchecked/topic/316792/Khoisan-languages.

9. 'Eina' is Afrikaans for 'ouch'.

10. My information on Khoesan languages was provided by L. J. Pratchett from the Humbolt Institute, during a series of communications between October 22 and 28, 2013.

11. 'Ah big yaws' is 'Sow Theffricun Innglissh' for 'I beg your pardon' and was commonly used by white, urban, English-speaking South Africans during the 1970s and 80s. It's also the title of a book by Robin Malan. 1972. Cape Town: David Philip Publisher.

12. John Foley on Oral performance conversions: "… because our culturally sanctioned ritual of converting performances into texts submerges the fact that in faithfully following out our customary editorial program we are doing nothing less radical than converting living species into museum exhibits, reducing the flora and fauna of verbal art to fossilized objects. In a vital sense textual reproductions become cenotaphs: they memorialize and commemorate, but they can never embody. 'From Oral Performance to Paper-Text to Cyber-Edition'. Oral Tradition, 20/2 (2005), pp. 233-263.

13. The storyteller here is Itibitseng Motsokwe. She is an ||Anikhwedam speaker from Botswana. She chose to tell a story in the language of her

government, Setswana. It's a tale about a second wife who is poisoned by the jealous senior wife, after being fed taboo meat. Many of the customs implicit in this tale are alien to San culture, but Itibiseng wished to demonstrate how the San are able to incorporate the tales of others into their storytelling traditions. Itibiseng accompanies the story with a traditional Zebra song. This performance was recorded at ||Khwa ttu San cultural centre, South Africa, August 2012. It is used here with Ms Motsokwe's permission.

14. Braai: A gathering at which the main feature of the meal is (barbequed) meat. Branford, J & W. 4th ed. *A Dictionary of South African English,* 1991, p. 47.

15. Pisiboro/Pishiboro: This trickster figure has different names and guises in Khoesan oral traditions. Mathias Guenther retells a version of this story called Pate and the Puffadder. Guenther, M. (1989) Bushman Folktales. Oral traditions of the Nharo of Botswana and the |Xam of the Cape. Stuttgart: Franz Steiner Verlag, p.121.

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Passage (2012, Tindal Street Press.) She is currently seeking funding for research around the digitization of San oral folktales.

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The Tablet Book 4

Jacob W. Craig

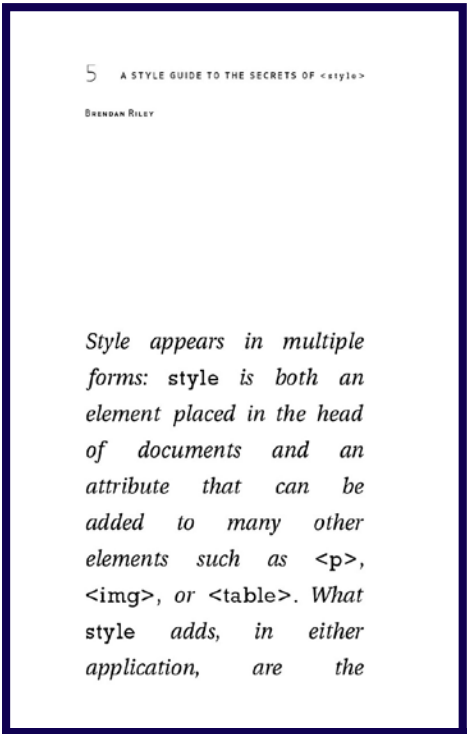
Print Made Fluid

Design, Format, and Attention in a Convergence Culture

Keywords: arrangement, design, digital publishing, ebook, visual rhetoric

Introduction

In this chapter, I consider the visual design of EPUB (short for electronic publication), a standard format for creating and distributing e-books, through the framework of writing as design.[1] The basic tenet of writing as design is that the design of the page cannot be separated from the content of the page; the verbal content, visual content, and the arrangement of the verbal and visual are sources of meaning. This understanding of writing as design has gained a great deal of traction in recent Writing Studies


5 A STYLE GUIDE TO THE SECRETS OF <style>

Brendan Riley

Style appears in multiple forms: **style** *is both an element placed in the head of documents and an attribute that can be added to many other elements such as* <p>, <img>, *or* <table>. *What* **style** *adds, in either application, are the*

Figures 1-3: Screenshots on a cell phone, a tablet, and a desktop – "A Style Guide to the Secrets of Style" (Riley 2010)

work, a discipline whose project is to study writing "its production, its circulation, its uses, its role in the development of individuals, societies and cultures" (Bazerman, 2002, p. 32). Taking seriously the proliferation of writing that is made possible by digital environments, scholars in Writing Studies define and trace the significance of digital environments for writing and writers. And the construct of writing as design provides one frame through which to conduct this work.

EPUB is an interesting study through the frame of writing as design, because texts encoded in EPUB are designed with significantly different kinds of concerns than other common formats like PDF (short for Portable Document Format). Where PDF preserves sophisticated layouts, EPUB creates fluid and malleable layouts or "on the fly formatting" based on the dimensions of the reader's device (IDPF, 2011, sec. 2.6). Figures 1-3 depict an e-book displayed on a smart phone, a tablet, and a desktop. These figures demonstrate what "on the fly formatting" looks like in practice (IDPF, 2011, sec. 2.6).

As these examples demonstrate, EPUB subverts fixed layouts in favor of malleable layouts to enhance readability. In this way, EPUB lacks a design in the traditional sense: a stable, spatial arrangement of text and image. Likewise, EPUB does not support the work of design in the traditional sense: composers creating layout and arranging visuals and text. However, EPUB does include design elements, and it can accommodate the work of design. By considering how e-books are designed and for what purpose, I argue that writers and publishers can begin to utilize formats in ways that meet purposes specific to particular writers, readers, and audiences.

FROM A TO A: KEYWORDS OF MARKUP

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If you want to know why we're on top of the pie? Cuz we got style.

GRANDMASTER FLASH, "STYLE (PETER GUNN THEME)"

THE <style> TAG IS UNIQUE IN HTML (Hypertext Markup Language). Although many tags perform singular functions, no other tag has such a wide range of effects or power as the <style> tag. Indeed, <style> often contains more information than the rest of the HTML file. Web authors may even place its contents into an external

2 mins left in book 33%

Figure 2.

To corroborate these ideas, I provide a discussion in three parts. In part one, I define and review the concept of writing as design. Then, I turn to the EPUB format itself, emphasizing the format's characteristics and the design principles at work in the format. In this section, I discuss the different ways readers attend to texts published on the screen and published in print, suggesting that each medium invites a different kind of attention.

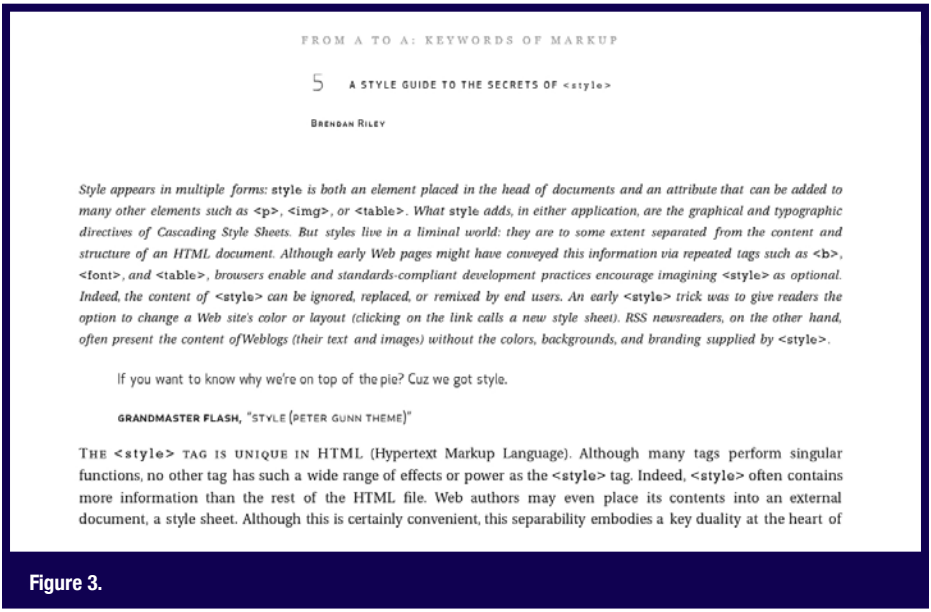

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Figure 3.

Finally, in the third section, I return to the frame of writing as design to discuss the ways that EPUB affords design work. In this section, I arrive at some practices for working with EPUB in ways that emphasize EPUB's affordances for the design of text and negotiate EPUB's constraints.

Writing as Design

In Writing Studies scholarship, scholars who attend to writing as a visual, alphabetic, and multimedia practice nominalize the work of writing in terms of design: writing as design and writer as designer. To help to define this concept, I provide the example of two discussions that demonstrate the work of design: the design of a multimedia scholarly article and the design of a conventional printed page. Through these two sample discussions, I

suggest that writing as design emphasizes four related ideas. The first idea is that verbal and visual content can work together and work separately to meet defined purposes. Second, depending on the purpose of a piece of writing, the visual and verbal work together in varied ways, e.g. illustration, demonstration, and enactment. Third, whether or not both visual content and the verbal content are present, writers design meaningful texts to meet defined purposes. Fourth, design work is distinctly about creating visual arrangements or layouts.[2] To show what the work of design looks like, I turn to two examples of design: Susan Delangrange's multimedia scholarship and Anne Wysocki's discussion of the visual rhetoric of the printed page.

Two Studies of Writing as Design

Shortly after Susan Delagrange published her first multimedia article, "Wunderkammer, Cornell, and the Visual Canon of Arrangement" (2009a), she published a companion piece recounting the process of designing "Wunderkammer" (2009b). In the companion piece, "When Revision is Redesign," Delagrange describes the initial process of designing "Wunderkammer" in terms of four ordered concerns. First, to design "Wunderkammer," Delagrange defined the purpose of the multimedia article, to "re-create as closely as possible the experience of arrangement and re-arrangement" of images as practices that facilitate critical inquiry (2009b, sec. "Design"). Second, Delagrange articulates what kind of visual content is necessary to enact or recreate her argument:

- The visual content is primary, verbal content secondary
- Visual content should be mobile to simulate the experience of arrangement
- Users should be able to control the "action" of the article (2009b, sec. "Design").

After defining the visual features necessary to meet her purpose, next, she selects a program to compose the article, Adobe Flash. Then, Delagrange begins creating and arranging the visual and verbal content of her article in ways that meet her purpose. Delagrange's design work is specifically about providing ways of making connections: "An idea suggests an image, an image a sentence, a sentence a motion, a motion a placement, a placement another sentence, that sentence a link, and so on. Each step in the design process is scaffolded by what has gone before, and anticipates what might come next" (Delagrange 2009b, sec. "Design"). The understanding of design that Delagrange describes in "Revision is Redesign" resembles her argument for visual arrangement in "Wunderkammer," suggesting that writing the argument she forwards in "Wunderkammer" and her demonstration of the argument were formative for her larger understanding of media and design.

> Multimedia technologies – computers, digital cameras, audio recorders – can be used to design pedagogical performances which embody theory, which articulate visual arrangement as embodied practice. We can engage with these artifacts and the social technologies in which they are embedded through the practice of what we might call "critical wonder": a process through which digital media designers can thoughtfully and imaginatively arrange evidence and articulate links in a critical practice of embodied discovery (Delagrange 2009a, sec. "Social Technologies").

Delagrange's concept of visual arrangement – the concept she argues for, demonstrates, and designs with – emphasizes the idea that "arrang[ing] evidence and articulat[ing] links" facilitates rhetorical invention. In other

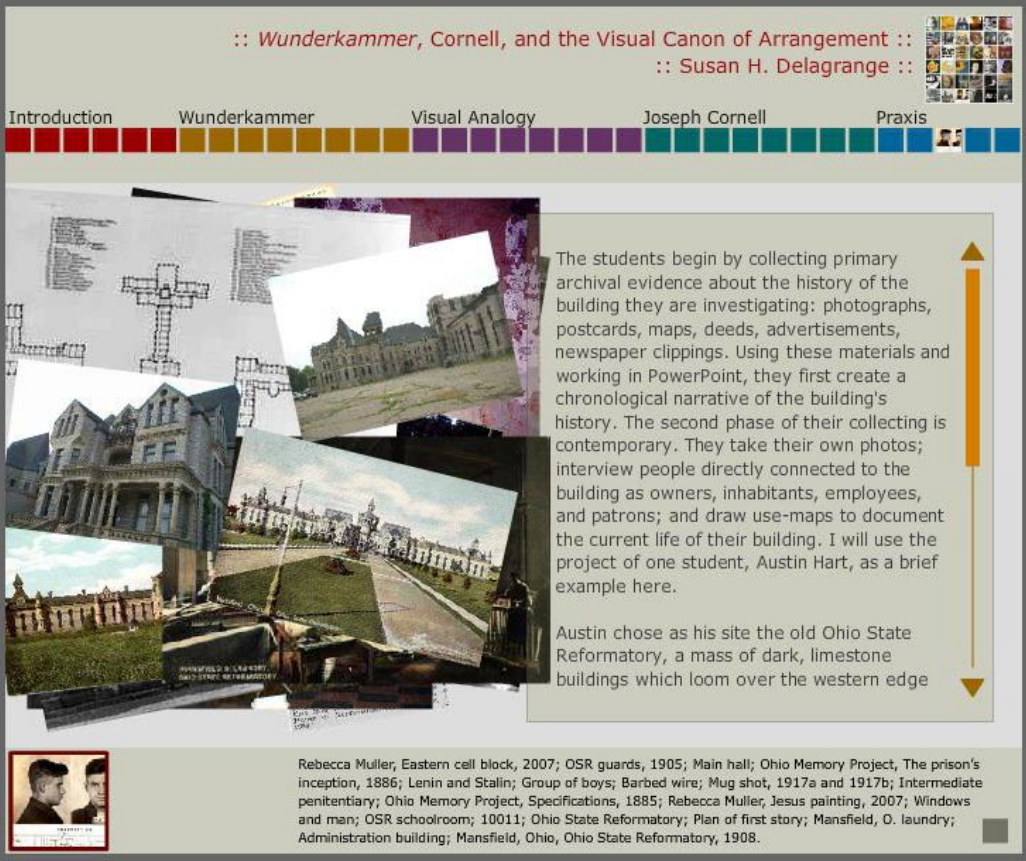


Figure 4: Screenshot – "Collecting" from "Wunderkammer, Cornell, and the Visual Canon of Arrangement" (Delagrange, 2009a). Tap for video.

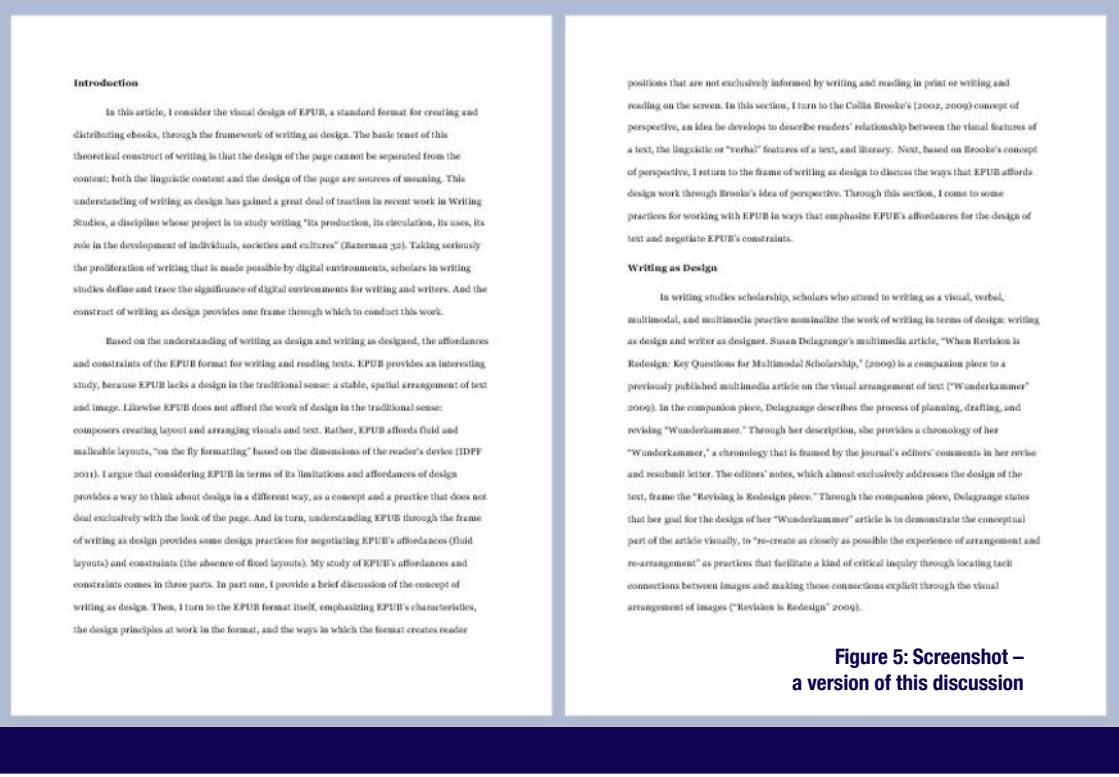
words, arrangement is generative. Through creating what Kathleen Blake Yancey calls "coherence" within the "multiplicity" of elements made available by digital platforms and "through the relationships between and among" the visual and the verbal, writers discover new ways of seeing (2004, p. 95). Figure 4 shows the way that the visual and verbal content in her article work together to simulate visual arrangement.

In Figure 4, we see animated images on the left demonstrating one of Delagrange's students' projects, a narrative of the Ohio State Reformatory in Mansfield, Ohio. The student, Austin, gathered archival materials and

contemporary images and arranged his images to develop a series of texts: "a chronological narrative of the prison, then successively on the inmates, the architecture, the contrast between reform and punishment, and the use of the prison as a movie set for *Shawshank Redemption* and other films" (Delagrange, 2009a, sec. "Collecting"). The portion of the article depicted in Figure 4 recreates Austin's project in its early stages when he was collecting materials and looking for connections the collected materials to develop the topic of his project.

"Wunderkammer" and the work that went into designing "Wunderkammer" is influenced by Delagrange's understanding of design (the understanding she argues for in "Wunderkammer"), her use of high-end production software, and the venue for the publication of her text – a web-based journal. As a result, Delagrange's design work is distinctly hypertextual: fragmented, dispersed, atomized, connected through two navigation schemes (the main screen and the color coded navigation bar under the title banner), and subject to readers' navigation decisions (Landow, 1992, p. 54).[3] Delagrange's practice of visual arrangement emphasizes three generalizable ideas about writing as design. First, the rhetorical purpose of the piece governs the selection and arrangement of content. Second, arrangement is a source of invention for both the writer during composing and the reader. Third, the arrangement of visual and verbal content work together hypertextually: mutually referencing one another to invite connections during reading.

In "The Multiple Media of Texts," Anne Wysocki argues that genres of texts have visual features and visual arrangements that perform "persuasive work" (2004, p. 124). The visual features of a page's verbal content cues readers to infer the text's purpose and the "social circumstances" within which the text was written (Wysocki, 2004, p. 126). For example, the presence of



Introduction

In this article, I consider the visual design of EPUB, a standard format for creating and distributing ebooks, through the framework of writing as design. The basic tenet of this theoretical construct of writing is that the design of the page cannot be separated from the content; both the linguistic content and the design of the page are sources of meaning. This understanding of writing as design has gained a great deal of traction in recent work in Writing Studies, a discipline whose project is to study writing "its production, its circulation, its uses, its role in the development of individuals, societies and cultures" (Bazerman 32). Taking seriously the proliferation of writing that is made possible by digital environments, scholars in writing studies define and trace the significance of digital environments for writing and writers. And the construct of writing as design provides one frame through which to conduct this work.

Based on the understanding of writing as design and writing as designed, the affordances and constraints of the EPUB format for writing and reading texts. EPUB provides an interesting study, because EPUB lacks a design in the traditional sense: a stable, spatial arrangement of text and image. Likewise EPUB does not afford the work of design in the traditional sense: composers creating layout and arranging visuals and text. Rather, EPUB affords fluid and malleable layouts, "on the fly formatting" based on the dimensions of the reader's device (IDPF 2011). I argue that considering EPUB in terms of its limitations and affordances of design provides a way to think about design in a different way, as a concept and a practice that does not deal exclusively with the look of the page. And in turn, understanding EPUB through the frame of writing as design provides some design practices for negotiating EPUB's affordances (fluid layouts) and constraints (the absence of fixed layouts). My study of EPUB's affordances and constraints comes in three parts. In part one, I provide a brief discussion of the concept of writing as design. Then, I turn to the EPUB format itself, emphasizing EPUB's characteristics, the design principles at work in the format, and the ways in which the format creates reader

positions that are not exclusively informed by writing and reading in print or writing and reading on the screen. In this section, I turn to the Collin Brooke's (2002, 2009) concept of perspective, an idea he develops to describe readers' relationship between the visual features of a text, the linguistic or "verbal" features of a text, and literacy. Next, based on Brooke's concept of perspective, I return to the frame of writing as design to discuss the ways that EPUB affords design work through Brooke's idea of perspective. Through this section, I come to some practices for working with EPUB in ways that emphasize EPUB's affordances for the design of text and negotiate EPUB's constraints.

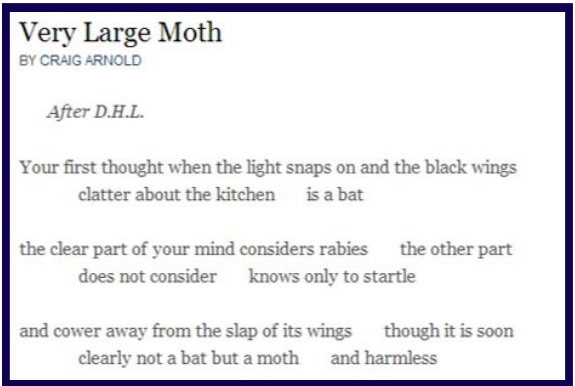
Writing as Design

In writing studies scholarship, scholars who attend to writing as a visual, verbal, multimodal, and multimedia practice nominalize the work of writing in terms of design: writing as design and writer as designer. Susan Delagrange's multimedia article, "When Revision is Redesign: Key Questions for Multimodal Scholarship," (2009) is a companion piece to a previously published multimedia article on the visual arrangement of text ("Wunderkammer" 2009). In the companion piece, Delagrange describes the process of planning, drafting, and revising "Wunderkammer." Through her description, she provides a chronology of her "Wunderkammer," a chronology that is framed by the journal's editors' comments in her revise and resubmit letter. The editors' notes, which almost exclusively addresses the design of the text, frame the "Revising is Redesign piece." Through the companion piece, Delagrange states that her goal for the design of her "Wunderkammer" article is to demonstrate the conceptual part of the article visually, to "re-create as closely as possible the experience of arrangement and re-arrangement" as practices that facilitate a kind of critical inquiry through locating tacit connections between images and making those connections explicit through the visual arrangement of images ("Revision is Redesign" 2009).

Figure 5: Screenshot – a version of this discussion

headers can suggest that the text is logical, an important value in academic and school-based settings (Wysocki, 2004, p. 124). Wysocki's observations about the visual presentation of pages that utilize verbal content contribute an important ideas to the concept of writing as design. The visual features of the text evoke a set of expectations in the reader based on their past experiences with conventions. For example, readers' past experiences with logical arguments suggest that the presence of headings and subheadings indicate the text is a logical argument, and each heading refers to a premise of the argument (Fig. 5). Likewise, a page with inconsistent line breaks, unconventional spacing, and a header can suggest that the text is a poem (Fig. 6).

This manuscript (Fig. 5) and Craig Arnold's "Very Large Moth" (Fig. 6) are not visual texts in the same ways that Delagrange's article (Fig. 4) is a visual text.


Very Large Moth
BY CRAIG ARNOLD

After D.H.L.

Your first thought when the light snaps on and the black wings
clatter about the kitchen is a bat

the clear part of your mind considers rabies the other part
does not consider knows only to startle

and cower away from the slap of its wings though it is soon
clearly not a bat but a moth and harmless

Figure 6: Screenshot – "Very Large Moth" (Craig Arnold, 2013)

Rather, where Delagrange's example of design might be understood as exceptional, Figures 5 and 6 are conventional. That is not to say that the kinds of texts discussed by Wysocki do not have a visual design. By writing in ways that observe the conventions of genres like a poem or a scholarly manuscript, a writer necessarily creates a visual design that does a kind of rhetorical work.

The visual features created by a text's conventions cue readers to infer the text's purpose (i.e. communicate a logical argument or depict an occasion through verse): "When you first look at a page or screen, you initially understand its functions and purposes because it follows the conventions of genre" (Wysocki, 2004, p. 124). Because a text's visual presentation says something about its genre, it also communicates important information about its purpose and its relationship to other texts. To say it another way, a conventional text's visual design does both persuasive and rhetorical work. For example, the manuscript's headers (Fig. 5) communicate the presence of logic and "on the page, they construct the logical arrangement of the argument for the reader" (Wysocki, 2004, p. 125). Albeit conventional, the visual design of an argument cues readers to attend to the text as a carefully arranged logical argument that participates in a larger context of academic discussion. And by the same token, the visual design of a poem cues readers to attend to the work as a poem, a kind of work where timing supports

the work's purpose. In the case of Arnold's "Very Large Moth," the poem's timing reinforces the subject of the poem: seeing a moth.

These examples show that writers do not necessarily need to create highly visual and hypermediated works for their writing to fall under the rubric of writing as design. Rather, through common conventions, texts are more or less already designed, because texts necessarily have visual features. Moreover, the design of a page does not necessarily require much attention from the writer to be an integral part of a reader's process of making meaning:

> Precisely because you come to an academic page bringing expectations about how that page should look means that the page has had to be visually designed to fit your expectations. This doesn't necessarily mean that the design has been much attended by the designer (Wysocki, 2004, p. 124).

In cases where design is informed by genre instead of a unique rhetorical purpose, the page's design still does rhetorical work. Namely, the design of a page does much to "direct a reader/viewer/browser's attentions within the context of other texts" (Wysocki, 2004, p. 126).[4] A page's design evokes a context and a set of expectations by which the reader can approach the text.

Through the two examples of writing as design discussed here, we see that understanding writing as design work is a powerful concept for understanding writing as both a non-verbal and a verbal practice. Moreover, by codifying writing as design work, writing scholars can include a diverse range of writing practices and writing environments under the rubric of writing: multimedia scholarly works in high end production software

and poems in word processors. But for all the traction that writing as design commands, an assumption about the nature of text underlies this understanding of writing: the fixity of the text. Whether the text is attached and sent through email, downloaded from a server as a web page, or printed and distributed, writing as design assumes that each copy of the text will look the same as the text that the writer designed in their Adobe suite, coded and uploaded through their FTP (file transfer protocol), or developed in their website builder. But this kind of fixity is not the case for the "on the fly" formatting used in texts that are encoded in EPUB, the standard format used to encode texts for display on different kinds of mobile devices: computers, tablets, ereaders, and cell phones (IDPF, 2011, sec. 2.6). Rather than displaying copies of texts with identical visual features, EPUB displays a version that is formatted specifically for the device by defining a number of textual features such as margins, the length of lines, breaks, and the placement of images to make the text fit for a range of screen sizes (Figs. 1-3).

Although EPUB files and e-books do not preserve the ways that writers design texts, I do not suggest that EPUB format lacks a design or is incapable of being designed. Rather, most of what comprises design work is still practiced or is capable of being practiced in EPUB formats. Per the two examples of design that I provide in the first part of this discussion, writers design both the visual and verbal content of texts in order to meet defined rhetorical purposes. Across Delagrange's and Wysocki's discussions, the visual and the verbal content of the page (including the visual arrangement of the page) work together to support the purpose of the text. And while EPUB formats do not provide for visual arrangement as a practice, ebooks have a visual arrangement that meets a rhetorical purpose. And I argue that purpose is to refashion the printed book for a convergence culture.

Rendering Files, Designing Texts

Like other methods of online publishing, EPUB is defined by a set of standards compiled and maintained by an organization. In the case of the EPUB format, that organization is the International Digital Publishing Forum (IDPF). The IDPF expresses their vision for the format's function and role in digital publishing through EPUB's standards. Reading across EPUB's standards, one design principle garners the most attention, readability. EPUB is designed to provide a readable presentation of content regardless of the user's device. EPUB "adapt[s] to the User rather than the User having to adapt to a particular presentation of content" (IDPF, 2011, sec. 2.6). To create a file format that adapts to the screen dimensions of multiple devices, EPUB uses a technological process called dynamic rendering. Dynamic rendering is achieved through different codes and coding languages that constitute the file type called EPUB.

When any encoded files are rendered (dynamic and otherwise) for visual presentation, a device reads at least two files: an HTML file and a CSS file. HTML defines the elements on the page: paragraphs, headers, tables, etc. The CSS file defines how the HTML file should be visually displayed on the screen: specific font types and font sizes for different elements, colors of different elements, and page's overall visual arrangement. In commonplace examples of rendering like the design of a web page, the web designer creates one CSS file that defines the visual presentation of the elements encoded in the HTML file. When a reader displays the web page, the HTML file is rendered in the way that the CSS file defines it (e.g. black text with a white background). If a writer attaches a CSS file with different style definitions, the files are rendered differently, creating a different visual presentation (e.g. white text with a black background). In this example, the web page is rendered once for all devices.

In contrast, EPUB files contain multiple style definitions that define the visual presentation for different devices: tablets, smart phones, e-readers, and computers. The EPUB file is visually rendered based on the kind of device used to present the text. This kind of rendering is called dynamic rendering, a process of generating the visual presentation of an e-book based on information about the device used to access and display the e-book files. Through dynamic rendering, the EPUB format provides readers with readable texts. EPUB describes dynamic rendering and the layouts generated by dynamic rendering as "[t]he design center of EPUB" (IDPF, 2011, sec. 4.3). And because dynamic rendering is the crux of EPUB's design, the IDPF discourages writers from including any kind of "highly formatted content in EPUB – for example via bitmap images or SVG graphics, or even use of CSS explicit positioning and/or table elements to achieve particular visual layouts" because this kind of content can disrupt dynamic rendering (IDPF 2011, sec. 4.3).

As the design center of the EPUB format, dynamic rendering and an adaptive visual presentation are indicators of a presence of design. However, in terms of design work, e-books are different in kind than the design of Delagrange's "Wunderkammer" and the visual conventions of genres discussed by Wysocki. In the cases of Delagrange's and Wysocki's discussions of writing as design, the text is designed in tandem with the text's purpose; design enacts and supports the purpose of a work. But in the case of e-books, their primary design principle – readability – is independent from and extraneous to the purposes of specific works. E-books are designed to meet a set of concerns unrelated to any one text's specific purposes or audiences.

By organizing e-books around the principles of readability and dynamic formatting, the book is refashioned into a form that "responds to, redeploys,

competes with, and reforms" other forms that occupy media landscape (Bolter and Gruisin, 1999, p.55). In other words, refashioning the book into an electronic form allows the book to participate in a culture of textual and media convergence constituted by "a range of specialized and incompatible devices," e.g. e-readers at home, tablets at work, smart phones during travel (Jenkins, 2006, p. 14). Instead of "function[ing] independently and establish[ing] its own separate and purified space of cultural meanings," the book is refashioned into a digital work accessible across the multitude of devices people use to consume media (Bolter and Gruisin, 1999, p. 55). Through the e-book, the book is made part of a larger constellation of creative works.

Interactivity and Attention

While technological processes like dynamic rendering and digital formats like EPUB have done much to refashion the book for a digital landscape, there is some debate about whether or not e-books can be read like a print book. To say it another way, there is some debate as to whether or not people attend to an e-book the same way they attend to the printed page, with a cognitive mode termed deep attention: "the cognitive style traditionally associated with the humanities" where a reader "concentrat[es] on a single object for long periods" (Hayles, 2007, p. 187). In a quantitative study that "investigated students' perspectives on the difference between reading in hard copy and reading in print," Naomi Baron found that "students overwhelmingly preferred to read in hard copy than [on the screen] online" (Baron, 2013b, p. 195). And this was the case for a range of kinds of texts that students read for academic purposes and for pleasure: "light" and "serious" nonfiction, "light" and "serious" fiction, and "course text[s]" (Baron, 2013a, p. 213). Students felt that reading in hard copy created the conditions for "better cognitive or pedagogical outcomes than reading on

screen" (Baron, 2013a, p. 215). Digital platforms support a more casual reading and help readers locate specific pieces of information, and the printed page is conducive for "deciphering and analyzing more-complex texts" (Baron, 2013b, p. 199-200).

While Baron's findings are informed by economic issues like the price of textbooks and ecological concerns like the conservation of resources, her study suggests that the medium in which we read – in print or onscreen – supports distinct ways of interacting with texts. The students that Baron surveyed see the printed page as conducive to a deep attention: long term focus and analysis made possible by the kinds of annotation and rereading afforded by the printed page. And the readers Baron surveyed see the kinds of interactivity made possible by the screen (e.g. the search function) as beneficial in moments of hyper attention, a mode of cognition "characterized by switching focus rapidly among different tasks" (Hayles, 2007, p. 187).

While it is clear that screens and paper invite different ways of interacting with a text, media can also influence the way readers see texts. Responding to the emergence of desktop publishing software, Richard Lanham argues that readers in a print-only culture understood text as "authoritative and unchangeable, transparent and unselfconscious" ("The Electronic Word," 1989, p. 270). Conversely, the pixelated word reveals the opacity of text, an opacity that had been present but had gone unnoticed because of a "decorum" that defined the ideal work's style as "not noticed," "unselfconscious," and "transparent" (Lanham, 1989, p. 266). In other words, the pixelated word transformed how we see texts: "We are always looking first AT [the text] and then THROUGH it…" (Lanham, 1989, p. 267).[5] Per Lanham, oscillating between looking at and looking *through* the

text is the distinguishing characteristic of reading on a screen; the pixelated word changes both the way we see texts and the way we read texts.[6] Framed this way, the function and status of the e-book as compared to the function and status of the print book is more than a question of the economic convenience of electronic formats or nostalgia for the printed codex. Readers attend to the pixelated word differently than the printed word.

Although e-books are designed for the screen, they are also designed to enact a number of print-based values about text. Namely, by refashioning the book to resemble the printed page regardless of the device used to display the text, the e-book is designed to be looked *through*. Returning to Wysocki's understanding of genre and the visual, e-books share many of the conventions of a print book: chapters, chapter headings, enumerated locations for navigation and reference, justified lines, and a number of visual elements demarcating sections like styling the initial letter of a chapter. These features cue readers to attend to e-books as they would a print book: to look *through* the text's surface, to get lost in the text. However, e-books and e-reader platforms also accommodate a number of features specific to digital texts, texts that invite readers to look *at* the text's surface. Many e-reader platforms allow readers to change a text's font size and typography. Readers commonly navigate through e-books via hyperlinked tables of contents and indexes, and many e-reader platforms have a built-in search function. And in some cases, reading platforms have built-in reference functions that move the reader from the book to a set of Google search results or to a dictionary entry.

Considered in tandem, the e-book's resemblance to the printed book and the distinctly digital ways of interacting with e-books suggest that

e-books do much to redeploy the book for a digital world, but as they are currently designed, they do not replace the print book. Understood this way, e-books may best be re-envisioned as a form that does not compete with print books but exists alongside print books. E-books could be a resource for writers who utilize digital forms to enact and support specific purposes for their texts. In the next section, I discuss two common practices that publishers and designers utilize when developing e-books: rich content to support navigation and the media query. To date, these practices are utilized by publishers for the sole purpose of making e-books readable across devices. I argue that these two practices offer ways of designing texts that support writers' specific purposes.

Rethinking E-books and their Design

To create specific kinds of conventional visual features in EPUB, developers rely on media queries, a set of CSS definitions applicable to specific devices. Media queries make dynamic rendering possible and enable developers to design texts that make up for differences in screen sizes. Figure 7 depicts a set of style definitions that create hanging indentions for the Amazon Kindle Fire and the Amazon Kindle.

This common but important part of developing texts in EPUB is a kind of design work. It involves recreating print-based conventions for digital texts and digital devices. These media queries are specifically designed for two purposes: to make dynamically rendered EPUB files look like the printed page and to function like the printed page. In other words, the media query creates the fit between the device and the e-book, a fit not unlike the printing on a page, the page itself, and codex.

A second common practice in developing EPUB files is the use of rich content like hyperlinks to create readable texts. This kind of work is most

```
<style type="text/css">
h1 {text-align: left}
p {line-height: 1;padding:0;margin:0}
</style>

<style type="text/css" media="amzn-kf8" [or "not amzn-
kindle"]>
p.firstline {margin-top:2em; margin-left:2em; text-indent:
-2em;}
p.line {margin-left:2em; text-indent: -2em;}
</style>

<style type="text/css" media="amzn-mobi">
p.firstline {margin-top:20px;text-indent:-40px}
p.line {text-indent:-40px}
</style>
```

Figure 7: EPUB media queries for hanging indentions in versions of Amazon Kindle

often done to create ways of navigating the text. Because dynamic rendering relies on the absence of stable and enumerated pages, EPUB developers rely on hypertext to direct readers to bibliographic references, to sections of the text from the table of contents, and to notes at the end of the text. These navigational links simulate the common practice of flipping to and flipping back to specific places in a printed book. While these practices are more visible to readers and thus more familiar, hypertext navigation is as commonplace as the use of the media query to create cross-platform compatibility.

Recreating print-based conventions in digital texts and creating rich content to promote functionality of texts are kinds of design practices. They are part of dynamically rendered e-books that have a specific purpose for a specific context: refashioning the printed book as a digital text. These practices are not indicative of any single text's purpose or any single author's purpose. In other words, the common design practices in EPUB do not provide for designing texts in ways specific to writer's purposes. I suggest that this is

the case, because EPUB files are rendered in ways that emphasize one print-based way of seeing texts. However, writers and publishers can utilize media queries and rich content as resources to design e-books in ways that support the specific purposes of texts. Before concluding, I provide example methods of utilizing rich content to move the e-book closer toward a form that can be adapted for specific texts and purposes. The first example explores alternate (albeit unconventional) ways of designing e-books visually. The second example explores a way of utilizing hypertext to create e-books that are distinctly digital and are more than refashioned print.

Reimagining the Design of E-books

A group of designers called the EPUB Zen Garden designed a corpus of e-books to comment on the untapped potential of e-books and to envision new ways of working with the form.[7] EPUB Zen Garden encoded a fair use copy of George Eliot's *Middlemarch* "to dispel the myth that digital books can't also be crafted works of visual design. Just as web design has evolved and matured, so too will e-books, and book designers have a new medium available in which to express their creativity" (EPUB Zen Garden, p. "About"). EPUB Zen Garden makes the case that e-books can be a powerful new medium where writers and designers can exercise their ideas. To demonstrate their claim, EPUB Zen Garden encoded *Middlemarch* eighteen different ways to render eighteen different designs (Figs. 8-10).

The examples of design (Figs. 8-10) created by the EPUB Zen Garden group suggest that there are different and relatively unexplored possibilities for incorporating design practices, values, and principles from web design – a predominantly visual medium – into the design of e-books. The examples above show radically different takes on design. One mimics the command

line operating system (Fig. 8), another mimics the modern printed book (Fig. 9), and the third draws on a convention of web design, the background image (Fig. 10). This web-sensible approach to design can be one way for writers to design e-books to meet specific purposes for their writing.

Figure 8: Screenshot – "Terminal" (EPUB Zen Garden)

A second design practice that has potential as a resource for design is the use of hypertext in e-books. In regular practice, hypertext is utilized as a way to mimic the ways in which readers navigate printed books. I suggest that working with hypertext differently can provide ways of creating different reading paths through the e-book. Through the use of internal hypertext, writers can bring ideas that are spatially distant in the piece of writing close together. By not relying solely on the sequenced, verbal presentation of information, writers can create different proximities and distances between parts of their writing. And in doing so, designing EPUB files can take on some of the aspects of design discussed by Delagrange, suggesting connections between parts of a text. This means that as a reader

Figure 9: Screenshot – "Seneca" (EPUB Zen Garden)

works with an e-book, the reader can follow suggested connections by navigating the secondary hypertext structure. This secondary navigation provides readers with a way to explore the argument both out of sequence and in sequence, inviting readers to access different "doors plotted by an author but activated by a reader" by which readers can discover new meanings, new arrangements, and new connections (Yancey, 2004, p. 95).

Both of these proposed ways of designing e-books through the EPUB format are based on the idea that e-books can be a form that does more than mimic the printed page. Writers design specific kinds of reading experiences to support their purpose for writing. Writers still attend to textual conventions that do significant rhetorical work visually. But writers can also find different ways of utilizing design practices to meet their specific purposes.

Conclusion

The current generation of digital platforms compels us to consider the different ways that writers and readers interact with texts. There is no longer one kind of screen, and in most contexts, screens garner as much cultural value as the page once had. Attending to this kind of digitality, writing scholars studying

writing through the construct of writing as design have primarily focused on texts that have one visual arrangement: texts that look the same for writers and readers. E-books provide an interesting study for this concept, because e-books make the idea of rendering a visible and important concern whereas the study of texts like Delagrange's and Wysocki's emphasize the idea of copies, not differently rendered versions. To come to a way to observe design where there are multiple versions of the text, I turned to Lanham's theory of looking *at* and looking *through*. Lanham's concept provides a way to trace understanding of text that inform EPUB's design, and I make the case that EPUB emphasizes a print-based understanding of text even though e-books are designed to participate in a digital world. By suggesting ways of designing e-books that encourage readers to interact with e-books as digital texts, I provide ways of designing e-books in ways informed by the purpose of the individual writer, not the larger publishing culture.

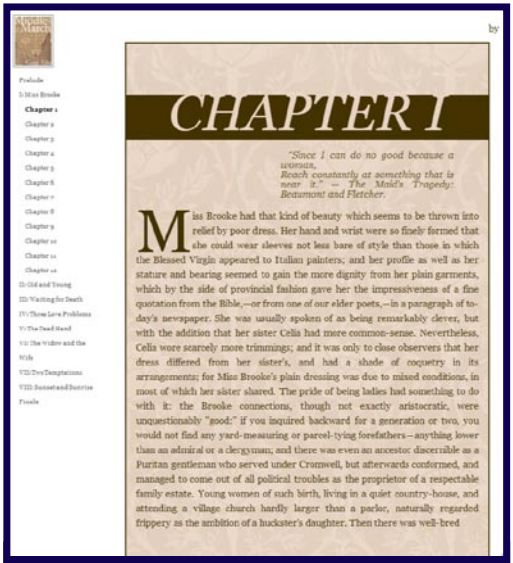


Figure 10: Screenshot – "Wallpaper" (EPUB Zen Garden)

When writers refer to the design of texts, often they begin by describing specific features of the text and the rhetorical purpose that they tried to accomplish or did accomplish. Designing texts in EPUB does not accommodate this kind of conversation. Rather, e-books invite conversations about how texts direct readers' attention and the experiences readers

are designed to have with the text's message and its material form. As the IDPF develops more and better standards to attend to the needs of the publication community, ebooks will change. And eventually, the devices that support ebooks will change. But in the contexts of emerging ways of reading and writing, we carry what we know, what we have done, and what we value into new experiences with literacies. EPUB shows us that while we are in a screen-based world, we gravitate toward what we know about print to find ways of seeing new textual forms. And I argue that being open to seeing the old and the new working together makes new ways of seeing possible.

Acknowledgements

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Notes

1. Throughout this chapter, I use EPUB and e-book interchangeably to refer to a textual form designed for reading texts on converged devices: tablets, smart phones, and e-readers among others. In technical terms, the e-book is the name of the form, and EPUB is a format and a method of creating an e-book. Because of the focus of my discussion, I did not find it necessary to define and maintain strict distinctions between EPUB and e-book.
2. Gunther Kress extends his theory of modality by arguing that the layout of the page is a mode, a resource for meaning making (2011, p. 142). I agree with Kress's inclusion of layout into his larger theory of modality. And like Kristin Prins I agree that Kress's theory of multimodality is a significant influence in understanding writing as design (2012, p. 147). But Kress is not

included here, because his concepts of design and visual arrangement are predicated on a larger theory of social organization, democracy, and globalism that is outside of the purview of this discussion.

3. To say it another way, Delagrange's text is a series of visually and verbally rich "doors" that invite readers to enter, but those doors are ultimately "activated by a reader" (Yancey 2004, p. 95).

4. By arguing that writers design texts through generic conventions, I do not suggest that a conventional design is less meaningful for readers than committing to Delagrangian design. Conventional design work and Delagrangian design work are different in degree, not in kind. Both attend to rhetorical purposes, audiences, and have the capacity for rhetorical invention.

5. The language that Lanham develops to describe perception has become important to both literary criticism and media studies. Stephen Best and Sharon Marcus draw from Lanham's vocabulary of looking *through* and looking *at* to develop a taxonomic introduction to surface reading (2009). And in media studies, Jay Bolter and Richard Grusin reconfigure Lanham's vocabulary to articulate their theory of mediation, a theory they refer to as remediation (1999).

6. When Lanham wrote "The Electronic Word," he was responding to a particular technological moment; however, that is not to say he was not forecasting what was to come. In *The Economics of Attention,* Lanham returns to the concepts of looking *at* and looking *through* to re-theorize textuality for a digital landscape constituted by "other, digital, displays" which include "book-sized electronic display devices" (2006, p. 80). Although he addresses a different technological reality in *The Economics of Attention*, his terms remain the same.

7. When I accessed EPUB Zen Garden's site on 24 March, 2014, the site was down. To provide a reference for this part of the discussion, I have decided to include the URL to a cached page captured and hosted through The

Wayback Machine. That URL is included in the references to this chapter. Here, I provide a URL for the source files to the eighteen editions of Middlemarch developed by EPUB Zen Garden <https://web.archive.org/web/20130909231013/http://epubzengarden.com/static/epubzengarden-samples.zip>. These source files were made available to me via Twitter from Liza Daly, EPUB Zen Garden's programmer (Daly 2014).

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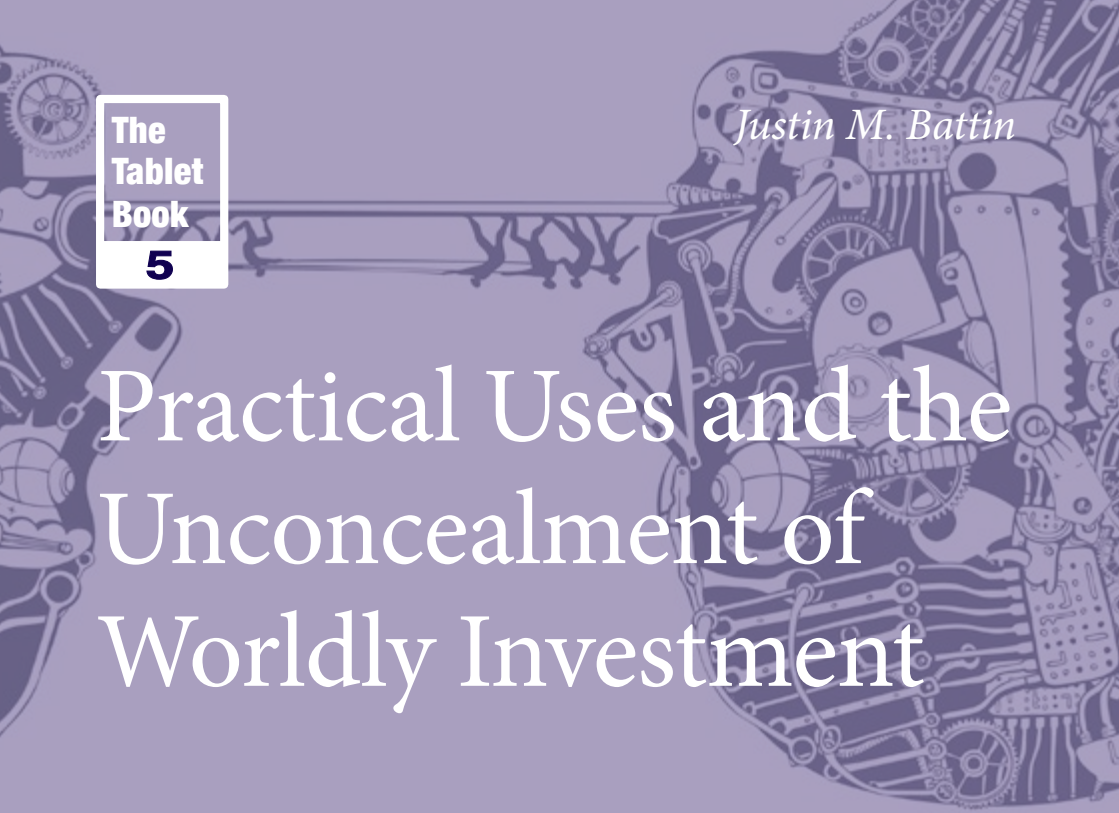


The Tablet Book 5

Justin M. Battin

Practical Uses and the Unconcealment of Worldly Investment

A Heideggerian Inspired Investigation into the Embodied Uses of Mobile Media Technologies

Keywords: Phenomenology, Heidegger, Mobile Media, Dwelling, Hybridity

> To undergo an experience with something – be it a thing, a person, or a god – means that this something befalls us, strikes us, comes over us, overwhelms and transforms us. When we talk of undergoing an experience, we mean specifically that the experience is not of our own making; to undergo here means that we endure it, suffer it, receive it as it strikes us and submit to it. It is this something itself that comes about, comes to pass, happens. (Heidegger, 1971 [1959], p. 57)

> The body (well) disposed towards the world is…oriented towards the world and what immediately presents itself there to be seen, felt and expected: it is capable of mastering it by providing an adequate response, having a hold on it, using it as an instrument that is well in hand. (Bourdieu, 2000, p. 142)

Introduction

This paper offers a Heideggerian-inspired analysis of mobile media technologies as examples of ready to hand[1] information technologies available for practical utilisation. I am specifically interested in how information technologies, and especially tablets and similar instruments, offer the unconcealment of a person's everyday ontological state as an invested entity with multiple intermeshed environments.[2] When using such terminology, I wish to denote not only the corporeal world with which one is in a mode of continuous interaction, but also immaterial domains available through engagement with mobile applications. Like Moores, in addition to others, I am skeptical about "grand claims about the disembodied character of online media use" (Moores, 2012, p. 52) and argue that exploring a person's practical engagement with these technologies leads to, in Heideggerian terms, the opening up or unconcealment of immaterial worlds that permeate the corporeal and reveals ways that users are involved in an ongoing series of dialectical, negotiated practices.

These interests are inspired by Moores' considerations for "the primacy of movement" (Moores, 2012, p. 7-10) with regards to media usage as well as thorough investigations into Martin Heidegger's later writings, principally *Building Dwelling Thinking* (1977 [1954]), *The Question Concerning Technology* (1977 [1954]) and *The End of Philosophy and the Task of Thinking* (1972 [1969]). In these texts, Heidegger demonstrates a turn of sorts, although

this is a contested distinction (Wrathall, 2011, p. 4), in that the emphasis is no longer on Dasein;[3] rather, the concepts of dwelling, technology and *alētheia* (truth conceived as unconcealment) become consistent fixtures throughout his arguments. Heidegger expresses concern that, in modern society, "we attain to dwelling, so it seems, only by means of building. The latter, building, has the former, dwelling, as its goal" (Heidegger, 1977a [1954], p. 323). This dilemma arises, principally, because of humanity's increasing tendency to view dwelling and building processes with technological rationales. Objects in the world are, through the lens of enframing, seen as a mere usable resource rather than through a mode that uncovers their existential importance (ibid, p. 302), which, as explained by Mark Wrathall, "would consist in some practice or object or person having an importance for our self-realisation. That is, the object or person or practice is something without which we would cease to be who we are" (Wrathall, 2011, p. 200). In order to confront this detrimental pervasiveness of the technological world, a world where nothing is capable of existential importance, Heidegger suggests that people must recognise that "we do not dwell because we have built, but we build and have built because we dwell, that is, we are *dwellers*" (Heidegger, 1977a [1954], p. 326, author's emphasis).

Drawing from Heidegger's concerns, this paper will attempt to address two principal queries. First, what does it mean to dwell and, second, relying on an analysis of ethnographic fieldwork conducted at the University of Sunderland, how can information technologies, particularly mobile media tablets, fit into a conceptual framework attentive to dwelling where technology can act as a saving power rather than source of enframing? Through this inquiry, I hope to demonstrate that, as Seamon and Mugerauer suggest, "dwelling incorporates environments … but extends beyond

them, signifying our inescapable immersion in the present world as well as the possibility of reaching beyond new places, experiences, and ideas" (Seamon and Mugerauer, 1985, p. 8). This paper is not concerned with exploring how these technologies contribute to Heidegger's concerns of enframing, a framework where technologies are predicated on challenging and manipulating the natural essence of things (Heidegger, 1977b [1954], p. 298), but rather with how a person's practical use of these technologies offers indications of how we fundamentally are as human beings.

The piece commences with a commentary on Heidegger's conception of dwelling and how, as dwellers, we seek to orient our self to the world to find feelings of at-homeness. In this piece, at-homeness is defined not necessarily as an achievement, but as an ongoing process where a person becomes absorbed into the world. For this section, I draw upon a diverse number of theoretical positions to provide an overview of what I consider to be both problematic and useful understandings of dwelling and its relationship to at-homeness. For this piece, dwelling means to reside with the world, to live in a way that is attentive to how our involvement with things allows an opening up, a revealing. Dwelling is not about finding 'place' and being content with it; rather dwelling is about the never ending, improvisational and orientational way we move through the world – this quest is what permits things to disclose themselves. Within the frame of this critical overview, the remaining analysis draws on ethnographic fieldwork to engage with the questions raised. I will focus on what I consider to be the three core dwelling practices: *wayfaring*, *hybridity*, and *mastery*. The three behaviors are explicitly linked and, in praxis, intertwined together. The goal is to employ an amalgamative approach to dwelling to demonstrate that people's relationships with mobile media technologies are ultimately grounded in corporeality and not necessarily motivated by some pre-

determined goal, but rather by something that is perpetually ongoing where new worlds and new possibilities can emerge.

Dwelling: A Brief Exploration

In Building Dwelling Thinking, Heidegger draws inspiration from the poetry of Hölderlin and Rilke to argue that it is a grave mistake to classify dwelling as a mere constructed entity or as an activity that man performs alongside a variety of others (Heidegger, 1977a [1954], p. 325). To conceive of dwelling in these terms neglects the entire essence of how humanity fundamentally dwells with an open and available world where the disclosure of new worlds is possible. For Heidegger, dwelling ought to be viewed through the lens of poetic thinking, a mode of approaching the world that is attentive to how a person's collective movements through and with the spatio-temporal environment results in an ongoing orientational development that permits the revealing of essences and possible worlds suitable for inhabitation. David Seamon suggests that, for Heidegger, "dwelling…is more than attractive buildings or surroundings, or needs defined by physical criteria – amount of floor space, lighting or whatever. Rather, dwelling involves less tangible qualities and processes – caring for the place where one lives, feeling at home in and a part of that place" (Seamon, 1979, p. 93). Anne Buttimer provides further commentary, arguing that dwelling "means to live in a manner which is attuned to the rhythms of nature, to see one's ecological and social milieu" (Buttimer, 1976, p. 277). With this statement, Buttimer alludes to Heidegger's concerns about authentic modes of dwelling. In *Building Dwelling Thinking,* Heidegger refers to humanity's adoption of technological rationales and the need to manipulate environments as a driver for its increasing sense of homelessness and inauthentic state. He posits that as an authentic dweller, a person's investment *with* worlds is geared towards organically building and nurturing at-homeness so the disclosure of being is

possible (Heidegger, 1977a [1954], p. 329-339). Please note the use of the term *with*. The rationale for employing 'with' rather than 'in' is because such terminology endorses the complex dialectic that is the process through which people make places of existence mesh together.

For this phenomenon to occur, a person must recognise that practices encourage absorption into the world, and such absorption fosters a sense of at-homeness and identification, or extent of attachment, that a person has for a place. Relph refers to this phenomenon as existential insideness (Relph, 1976), a concept that conveys how a person's identification with a place is understood in relation to the stability that it provides and yet, is taken-for-granted despite this genuine emotional attachment. Existential insideness is contrasted with outsideness, a mode of experience where people feel separated or alienated from a place. Seamon and Sowers suggest that:

> The crucial phenomenological point is that outsideness and insideness constitute a fundamental dialect in human life and that, through varying combinations and intensities of outsideness and insideness, different places take on different identities for different individuals and groups, and human experience takes on different qualities of feeling, ambience, and action (Seamon and Sowers, 2008, p. 45).

Relph's use of Heidegger's philosophy provides a useful framework for exploring how people relate to particular places; however, this proposition carries a distinct dualism in that a sense of place is described in terms of binary oppositions and an affixation to geographic locales. Additionally, the argument fails to explore the intimate way with which a person is

perpetually engaging with the practice of at-homeness. Relph's experiential perspective is similar to arguments proposed by Yi-Fu Tuan, another cultural geographer who proposes that "when space feels thoroughly familiar to us, it has become place" (Tuan, 1977, p. 73). An issue with this experiential perspective is that place is conceived as something with an achievable completion. Rather than consider the experiential perspective of space becoming place, I prefer arguments proposed by the anthropologist, Tim Ingold. *In Being Alive* (2011), Ingold reformulates the notion of place into multiple, intertwined paths. A person's perceptual understanding is always, to borrow from Deleuze and Guattari, in a state of constant becoming and is never in a fully formed state; as such, the finiteness and concreteness associated with space gradually transforming into place, in my estimation, is problematic.

Ingold recommends the concept of wayfaring, a term he defines as "a skilled performance in which the traveller, whose powers of perception and action, have been fine tuned through previous experience, 'feels his way' towards his goal, continually adjusting his movements in response to an ongoing perceptual monitoring of his surroundings" (Ingold, 2011, p. 220). Wayfaring thus emphasises not only a person's investment with the world, but also a person's ongoing mobility; Ingold posits that "the wayfarer is continually on the move. More strictly, he is his movement" (Ingold, 2011, p. 150). This is a proclamation that I am willing to grant sympathy; it is beneficial to consider the self as a constant traveller simultaneously inhabiting numerous, intersecting environments because, as Ingold insightfully suggests, "lives are led not inside places, but through, around, to and from them, from and to places elsewhere" (Ingold, 2000, p. 229). Differing from Tuan and Relph, Ingold thus usefully suggests that life is not necessarily place-bound, but place-binding; Ingold states that life "unfolds not in places but along paths"

(Ingold, 2011, p. 148). As wayfarers, people are in a constant mode of mobility, always in motion along a path. However, it is crucial to remember that this path is not necessarily following a strict, linear development; rather, wayfaring occurs within a meshwork-like structure of fluid space. A path is always a path to somewhere else, an open, incomplete meshwork of becoming with interconnecting links. In the end, Ingold suggests that "wayfaring is our most fundamental mode of being-in-the-world" (ibid, p. 152).

By using the Ingold's notion of wayfaring, further emphasis is placed on a person's bodily mobility and phenomenological intentionality.[4] Including the body is imperative because, as the philosophy of Merleau-Ponty posits, "our insertion into the world is through the body with its motor and perceptual acts" (Moran, 2000, p. 403). Through the practice of wayfaring, we interact with objects in the world and thus a rapport is built through practical engagement, which, in this author's opinion, is an equally foundational component for establishing the feeling of at-homeness. As Mark Wrathall states:

> Although the world is meaningful or intelligible to me when I grasp the practical and equipmental contexts that embed all the things that populate the world, nothing in the world matters to me on the basis of this intelligibility alone. It is only when I am engaged in activities myself that any particular object comes to hold any special significance for me. As a result, in a world where I am not active, where I have no purposes or goals, where I am drawn out into no involvements, no thing or person could matter to me. Everything would be spread out before me in an undifferentiated (albeit meaningful) irrelevance (Wrathall, 2011, p. 200).

An example of Wrathall's proclamation concerning involvement becomes evident when asked to describe a tablet. Initially, I will take the present-at-hand object and, because it is occurrent to me, perhaps describe it in terms of its ontic properties - weight, colour, texture and so on. However, it is only when I actually use the tablet that I come to know not only what the tablet truly is, but also the investment I share with it. At the moment of operation, I merge with the tablet and the definitive line that distinguishes flesh and material, at least perceptually, begins to blur. Thus, over time, it becomes a part of my bodily habitus (see Bourdieu, 2000, p. 128-163). For instance, in Merleau-Ponty's oft-cited example of the blind man's cane, the stick "has ceased to be an object for him, and is no longer perceived for itself; its point has become an area of sensitivity, extending the scope and active radius of touch, and providing a parallel to sight" (Merleau-Ponty, 2002 [1962], p. 165). Taylor Carman, summarising Merleau-Ponty's philosophy, writes:

> The body is a primitive constituent of perceptual awareness as such, which in turn forms the permanent background of intentionality at large. The intentional constitution of the body is not the product of a cognitive process whose steps we might trace back to the founding acts of a pure I. Rather, the body in its perceptual capacity just is the I in its most primordial aspect. For Merleau-Ponty, then, strictly speaking, we do not have bodies, rather we are our body, which is to say, we are in the world through our body, and insofar as we perceive the world with our body (Carman, 1999, p. 224).

With this summation, Carman highlights Merleau-Ponty's proposition that a person's perceptual awareness is not necessarily wrapped up in either the isolated mind or the mere physical body; such a distinction would impose

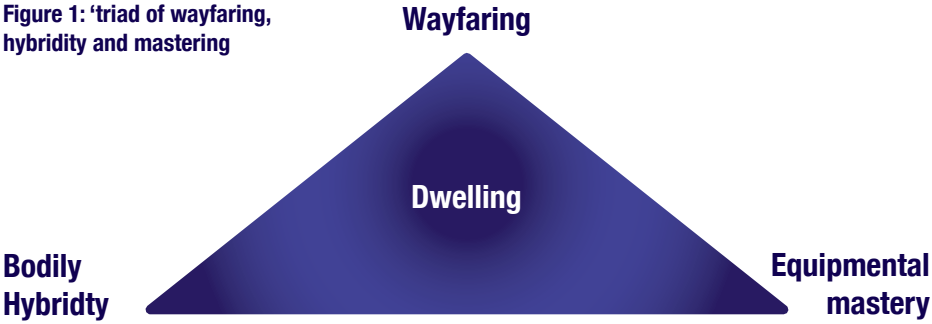
disengagement and a problematic Cartesian dualism. Rather, the body and the mind must be considered as an inseparable tangled whole. For Merleau-Ponty, it is not so much a consciousness, but a body that embraces and takes investment with the world and it is this integral investment with the world, and the things that populate it, that reveals a person's basic hybrid nature. Nigel Thrift, the chief architect of cultural geography's non-representational turn, warns that is unwise to assume that the make-up of the human body stops simply with a person's flesh; he suggests that "the human body is what it is because of its unparalleled ability to co-evolve with things, taking them in and adding them to different parts of the biological body to produce something which, if we could see it, would resemble a constantly evolving distribution of different hybrids with different reaches" (Thrift, 2007, p. 10).

Because we are collectively wayfarers and hybrid beings, we also, through the repeated use of objects, become masters. Mastery is a sort of embodied confidence that shows itself when practically handling an object; "everyday equipment is primarily understood in the skillful mastery of its proper use – what we might call a 'hands' on intelligibility" (Haugeland, 2000, p. 49). Like our unification with objects, in addition to our state as wayfarers, a person's mastery of an object is also often pre-reflective. With mastery of a common object, our ability to use it in its practical sense requires not cognitive thought, but an embodied sensibility. For Heidegger, mastery is possible because "equipment is essentially something-in-order-to … equipment is constituted by various ways of the 'in-order-to', such as serviceability, conduciveness, usability, manipulability" (Heidegger, 1927 [1962], p. 97). Equipment, in this sense, is seen as not simply a noun, but a verb. This 'in-order-to', as Heidegger explains, is correlated with 'towards-which' (ibid, p. 99), in the sense that "the work which we chiefly encounter in our

concernful dealings – the work that is to be found when one is 'at work' on something – has a usability which belongs to it essentially; in this usability it lets us encounter already the 'towards-which' for which it is usable" (ibid). However, Dreyfus argues that "it is a mistake to think of the toward-which as the goal of the activity … activity can be *purposive* without the actor having in mind a *purpose*" (Dreyfus, 1991, p. 92). I find this distinction important for inclusion because of how it links with wayfaring. While Ingold does explicitly state that wayfarers feel their way towards their goal, my interpretation of his usage of goal here is not defined as a milestone or accomplishment, but rather as a flexible moving forward in the sense that further disclosures are possible. This links to Heidegger's notion of horizon, conceived "as not that at which something stops … but that from which something begins *its essentially unfolding*" (Heidegger, 1977a [1954], p. 332). Finally it is also imperative to recognise that mastering equipment also requires a pre-reflective understanding of where this equipment fits into what Heidegger refers to as its "referential totality" (Dreyfus, 1991, p. 92). By this he means "equipment is encountered always with an equipmental contexture. Each single piece of equipment carries this contexture along with it, and it is this equipment only with regard to that contexture" (Heidegger, 1988 [1975] p. 292). In short, we comprehend and master equipment based on how it fits into an equipmental nexus.

In the end, dwelling is a form of being-in-the-world with a focus on inhabitation *and* absorption. Dreyfus argues that "when we inhabit something, it is no longer an object for us but becomes part of us and pervades our relation to objects in the world … dwelling is Dasein's basic way of being-in-the-world" (Dreyfus, 1991, p. 45). In this section I have tried to show that a dwelling perspective is attentive to a human being's invested involvement with the world. Dwelling is not necessarily about finding 'place'

Figure 1: 'triad of wayfaring, hybridity and mastering



and being satisfied with it, but rather the ongoing, never ending process that permits a moving forward, an opening up. Furthermore, being-in-the-world is not meant to imply that we are simply in the world spatially, in that we are 'in' space, but rather in the primordial sense in that 'in' is to reside with, to dwell with (ibid, p. 42). We reside with the world and are involved with it; this involvement with the world is made clear through the triad of wayfaring, hybridity, and mastering (see Figure 1). I have chosen to illustrate this phenomenon with a triad because, drawing from Seamon, a triad "suggests a working relationship among the parts – as in a chord triad of music" (Seamon, 1979, p. 131).

This way of being-in-the-world suggests a form of life that many fear is undermined by technocratic rationality. At this point I wish to return to Heidegger's theorisation of technology and the distinctions he makes between enframing and unfolding, *technē* and *poiēsis.* Heidegger's writings on technology might be taken to suggest that humans are losing sight of these kinds of ways of being-in-the-world, in part due to the encroachment of technocratic rationality. However, it should be remembered that Heidegger's writing explores the question concerning technology, rather

than simply condemning it; this is made evident when he writes "the question concerning technology is the constellation in which revealing and concealing, in which the coming to presence of truth comes to pass" (Heidegger, 1977b [1954], p. 315). In his seminal essay, Heidegger's etymological analysis of *technē* leads him to the Greek sense of the word, which he claims that, until Plato, was linked to the word *epistēmē*, and that both words are terms for knowing in the widest sense (ibid, p. 294). For Heidegger, this knowing provides an essential opening up, a bringing-forth (*poiēsis*), or something out of concealment into unconcealment. Heidegger proposes that:

> *Technē* is a mode of *alētheuein.* It reveals whatever does not bring itself forth and does not yet lie here before us, whatever can look and turn out now one way and now another … thus what is decisive in *technē* does not lie at all in making and manipulating nor in the using of means, but rather in the revealing mentioned before. It is as revealing, and not as manufacturing, that *technē* is a bringing forth (ibid, p. 295).

This understanding of *technē*, for Heidegger, has gradually disappeared from the world. From Heidegger's perspective, modern technologies, both industrial and informational, produce unforeseen and irreparable dangers to humanity's ability to grapple with itself and its environment essentially. This he coins as enframing. When occurring within the confines of an enframed state, man "pursues nature as an area of his own conceiving, he has already been claimed by a way of revealing that challenges to him to approach nature as an object of research, until even the object disappears in the objectlessness of standing-reserve" (ibid, p. 300). This mindset invariably leads to a loss of what gives humanity its unique quality, the sense of what

it means to be human and the ability to recognise essential unconcealment (*alētheia*). Cybernetics, in particular, is the ultimate technological obliteration of being in that all things, including human beings, are there to be nothing but a part of the standing reserve, resources "switched about ever anew" (ibid, p. 298). Despite this clear dystopian vision, in the end, it is crucial to remember that he suggested "the closer we come to the danger, the more brightly do the ways into the saving power begin to shine and the more questioning we become" (ibid, p. 317). With this statement in mind, I will use mobile media technologies to demonstrate the revealing power of technology in the sense of poiēsis; such is the focus of my next section.

Synthesising Dwelling and Mobile Media Technologies

If we grant Heidegger's concerns towards the technological epoch sympathy, particularly those of cybernetics, then how can mobile media technologies be explored within a dwelling perspective? Heidegger's suggestion was, according to Hubert Dreyfus, that people "must learn to appreciate marginal practices … the saving power of insignificant things" (Dreyfus, 2002, p. 171). Based on ethnographic research, it is my contention that a person's engrossment with mobile media technologies and immersion into the worlds that they permit encourage the unconcealment of a person's triad of involvement (in the sense of being a wayfarer, hybrid-entity, and eventually, master). However, a unique quality about these technologies, in particular, is that they not only reveal the triad's presence in the corporeal, but also in immaterial arenas. In order to explicate this, drawing from Dreyfus, a person must be attentive to the nature of practice and how, as wayfarers that forge hybrid relationships with and mastery of encountered objects in the world, we build and nurture intermeshed environments, both material and immaterial. My case study comprised of interviews with ten first year university students at the University of Sunderland experiencing

the transition from secondary education to university during the fall 2013 semester. The aim of my interviewees was to explore their own use of these technologies to see how they might, in Heideggerian terms, permit an opening up, a revealing of their position as dwellers. As Heidegger states, beings can be as beings only if they stand out within what is lighted in this lighting. Only this lighting grants and guarantees us as humans a passage to those beings that we ourselves are not, and access to being that we ourselves are" (Heidegger, 1977c [1960], p. 175).

Figure 2: my Nexus 7 Android tablet

Before turning to my informants, I wish to first turn to myself. Please take note of the tablet's layout (see Figure 2).

When I grip the tablet, my hands are aware of the exact pressure to apply, as the tablet is, of course, a fragile entity. The precise movements to open the tablet are those that have become habitual due to repeated practice. Because my left-hand is the dominant one, it is the hand which first takes hold of the instrument. My right hand then gently flips the protective case

open and, mimicking a sort of rhythmic dance, replaces the left-hand as the device's support base. Then, in a quick instance, the point finger of the right hand presses the power button. Immediately following the device's activation, the left-hand, without hesitation, unlocks the device by entering the designated password. Suddenly, all the applications on the home screen are revealed. Depending on the context (what application is needed), the left-hand knowingly moves towards the direction of the application and opens it via a routinely employed tender tap. This application, and all its features, becomes unconcealed as a world of its own with its own unique properties and being. With this example, I exhibit astoundingly precise dexterities with my fingers as I wayfare through this digital screen. With what Merleau-Ponty coins as "knowledge in the hands, which is forthcoming only when bodily effort is made and cannot be formulated in detachment from that effort" (Merleau-Ponty, 2002 [1962], p. 166), I scroll through Internet pages and engage with the tapping and double tapping of icons and links, often whilst simultaneously using fingers to zoom in and out in an effort to achieve greater detail. The practice of scrolling, in particular, is vital when deploying a Kindle or e-reader, as the interface is designed in such a way that demands the frequently deployment of such a skill. The distinction between the utilised physical object and myself simply disappears into a current of continuous active motion.

One interviewee described how when she first purchased the tablet as a replacement for a defunct laptop, her ability to operate it could be considered clumsy at best, so much that during this initial stage, she found herself somewhat indifferent towards exploring its many functions. The tablet's lack of a conventional keyboard and overall cumbersome nature in that it can neither slide into a coat pocket nor be conveniently operated with one hand were two reasons for this general disinterest. However, after

playing with the device, as a wayfarer she began to adopt ways of using it that were considered comfortable and, eventually, absorbed into other patterns of life activity. For instance, when using the tablet to simultaneously watch a downloaded television programme and chat with friends via Facebook Messenger, the interviewee observed that a simple bodily adjustment was required to perform both tasks. Rather than place the device on the lap as one would do with a notebook computer or hold it with one hand like a mobile phone, the tablet, in this instance, required her to embrace a laying position on the bed or sofa so that the tablet could rest diagonally against either the bed headboard or the arm of the sofa. Additionally, a pillow was required to prop up her upper body. In this position, both the hands and eyes are situated so she can collectively watch the desired programme and converse with friends through the messenger application. Additionally, the nature of the tasks, as well as the intensity required to perform them, corresponds with the body's at-ease position. Other modes of operation required distinct bodily maneuvers as well. To play games necessitating quick on-the-fly adjustments, a traditional sitting position with one hand completely under the tablet as a support base and the other free to tap the screen was optimal. When playing games, my interviewee noticed that she prefers to sit with her legs folded and upper body somewhat hunched over in the direction of the tablet as though the entirety of her body's energy and concentration is fully directed towards accomplishing this task. Despite whatever context, she had, through repeated practice, mastered the instrument. However, after a while she did admit that it would not be long until she purchased a detached keyboard, as writing essays through a touch screen proved to be a very difficult endeavor!

In our conversations, she explained that as her usage of the tablet permitted its integration into her life, she had come to forge an affective

relationship with it, now designating the technology as an inseparable part of her perceived self. Nevertheless, despite this attachment to the device, when asked to explain the necessary steps to unlock the device's Instagram application and upload a photo via memory, she displayed great difficulty identifying the intricacies of a procedure that she so regularly completed without contemplation. When the device was returned, however, the task was performed effortlessly, accomplished in matter of seconds. When we discussed why this was possible, the consensus was that the necessarily bodily competence to perform the required task automatically was not driven only by mastery and habit, but also investment. She exhibits qualities of what David Seamon refers to as a feeling-subject, an experiential stratum associated with attachment that is "*a matrix of emotional intentionalities within the person which extend outward in varying intensities to the centers, places, and spaces of a person's everyday geographical world*" (Seamon, 1979, p. 76, author's emphasis). A feeling-subject is driven by attraction and closeness to specific things encountered in the world; the person becomes drawn to the object and their bodily performance adjusts in ways to fulfill that desire. This interviewee, as someone who is invested, or, a feeling-subject, demonstrates that her ability to perform a task prior to reflective thought is knitted with affectual attachment she shares with the specific path-like movements that are only performable *when this particular piece of technology is present*. If given a different piece of technology with similar functions, she would most likely be able to decipher how to perform the same task; however, it may take a series of trial and error negotiations before she can confidently do so. This example implies that bodily-performed tasks are far more than tactile pleasures or mechanical habitual movements, but rather actions of investment where a person receives embodied satisfactory feelings through a perceived mergence, defined by David Seamon as "a break in the boundary between person and world (ibid, p. 101).

Thus far I have attempted to demonstrate how wayfaring, as a part of dwelling, is a motivation-infused set of path-like movements and haptic sensibilities that fosters hybridisation between a person and utilised piece of technology. However this is not the only form of fusion that occurs. When synthesised with the material tablet, the interviewees also came to feel a mergence between the physical self and arenas of immateriality, a synthesis that impacted their abilities, intentions, direction, and emotions. These immaterial worlds, such as Instagram, Facebook and Twitter, were not considered isolated arenas in the cloud, but worlds that permeated the membrane-like physical present in that their involvement initiated a trigger of bodily felt meanings and inspirations.

Although stated in a variety of terms, the interviewees proposed that, when merging with these environments, they began to recognise their position as 'perpetual builders' in the sense that they were always constructing. These acts of construction were not driven by an achievable concrete conclusion, but as a mode of being where a person invests and reinvests in the things with which they care about. Emma, from Northern Ireland, recognised how she often 'builds' through her iPad. Primarily her building practices consist of constituting the self and its relationship with online communities. During television broadcasts of the programs *Sherlock* and *Supernatural*, Emma immediately takes her iPad and effortlessly uses her hands and fingers to unlock Instagram and Twitter with intent to engage the show's followers in dialogue. As she performs the embodied tasks and the immaterial worlds open up to her, she specified that a variety of emotions materialise through her body, whether through a miniscule increase in temperature, quivering movements, or a simple smile. This sort of reaction suggests that it is not simply the material technology that is the driver of her motivation, but

the embodied foresight of what it allows her to do and where it allows her to go (see Urry, 2007, p. 47 for an overview of imaginative, virtual and commutative travel). These are not the only way that her emotions manifested through the body. For example, unexpected events that occur on the shows, viewed through the television (not the iPad), often inspire an emotionally charged bodily reaction that manifests itself through bodily interaction with the tablet and the available immaterial worlds within. Following the occurrence of an event deemed worthy of discussion, Emma grips the iPad and immediately utilises her fingers to comment on Twitter. What was initially felt in the body then made its way through her limbs and into her fingers, to which, upon the gripping of the iPad, initiates the critical mergence. Excitedly, Emma's finger knowingly moves to the proper place on the tablet to type her desired status. This felt bodily reaction, inspired by the show's unexpected turn, has manifested itself as an immaterial presencing in the form posts, responses to others, and the deployment of hashtags (#). As a wayfarer, Emma feels her way towards her desired destination; in Ingold's terms (2007, p. 89), her "inhabitant knowledge" guides her as she goes along. With her embodied actions, she exists dialectically in both the corporeal and immaterial that, especially during the duration of the show, have merged together.

The phenomenon of the material merging with the immaterial can extend beyond a brief moment of encounter. Environments with which we frequently interact converge and, over time, become inseparable. For instance, one interviewee, named Joanne, prefers to inhabit and tie together as many social networking sites as possible to intensify and strengthen her relationships; as such, she frequently monitors her inhabited environments to maintain symmetry between her immaterial and corporeal self. In our conversations, Joanne implied that she feels connected to her immaterial

environments at all times, particularly Facebook and Twitter, because they are a part *of* her. Because she has interacted with these immaterial domains throughout a majority of her adolescent and young adult years, they, and their potential offerings, are now embedded within her. When thinking of world building in terms of intermeshed lines, especially in this scenario, it befits one to make mention of the term connected presence (Licoppe, 2004), a theoretical concept to describe new forms of mobile based sociability. Connected presence involves when "participants multiply encounters and contacts using every kind of mediation and artifacts available to them: relationships become seamless webs of quasi-continuous exchanges" (Licoppe and Smoreda, 2005, p. 321). When a person is a frequent user of communicative applications available through mobile media technologies, that person's relationships with others becomes much more ecological, a web of connectivity and negotiation across multiple arenas, which is fluid and connected to a wider range of mobile charged activities. As such, when accustomed to this form of being-in-the-world, one where connected presence is deeply entrenched within the self, there exists an expectation that unconceals itself when the mobile technology goes missing or destructs. If this scenario occurs, then this person's embodied understanding of self becomes fractured, often resulting in a manifestation of anxious and frustrated feelings that materialise through the lived body. For example, one interviewee, named Glen, had to briefly forfeit his technology due to the temporary cancellation of the data plan. Glen mentioned that he would find himself still reaching for the device, only to be disappointed once reminded that it can no longer carry out the behaviors he had routinely performed. In the end, because of the continued recognition of its inoperability, the device became something regularly left behind. However, this situation can be a beneficial phenomenon because, as Dreyfus notes, "the disturbance makes us aware of the function of equipment and the way it fits into a practical

context … the point of our activity becomes apparent to us" (Dreyfus, 1991, p. 99-100). When the device is absent, this taken-for-granted mode of being-in-the-world becomes unconcealed, raising awareness to the correlation between marginal practices and a state of mergence.

With these select interviewees, I have tried to demonstrate how dwelling can become far more apparent by giving careful consideration to the practical utilisation of mobile media technologies. My intent was to not only counter problematic conceptualisations that disengage online inhabitation, but also to show that technology can act as a saving power by the recognition of Dreyfus' marginal practices. Recognising these practices unconceals a person's ongoing investment with the world. As Merleau-Ponty states, "our relationships with things is not a distant one: each speaks to our body and to the way we live. They are clothed in human characteristics and conversely they dwell within us as emblems of forms of life we either love or hate. Humanity is invested in the things of the world and these are invested in it" (Merleau-Ponty, 2004, p. 49). Drawing from Merleau-Ponty's proclamation, it is through the body that people orient their self to the world, to seek a sense of at-homeness, but (to reiterate) not in terms of its completeness, but rather as a meshwork of continued rhizomatic, embodied involvement.

Conclusions

With a dwelling perspective, an approach in which, as Tim Ingold suggests, "the world continually comes into being around the inhabitant, and its manifold constituents take on significance through their incorporation into a regular patter of life activity" (Ingold, 2000, p. 153), in what way has a person's relationship with these technologies been unconcealed? I have advocated that a person's relationship with tablets, kindles, and e-readers (note: this can

extend to other forms of mobile communicative technologies) encourages the unconcealment of place-binding lines of involvement. Although certainly not exclusive to these technologies, the user's investment in world building, in both the physical and immaterial, becomes knotted through the use of these technologies, revealing our meshwork-like state of inhabitation. It is also my assertion that when using these tools, our attentiveness to marginal practices reveals how we fundamentally care about the world.

In closing, the information presented in this paper merely skims the surface of how mobile media technologies can be explored using a framework attentive to dwelling. This statement is not meant to undermine my work, but is rather as an invitation for others to contribute to the proposed form of thinking and investigation. Also, I recognise the overt optimism contained in the essay and wish to clarify that, despite such enthusiasm, I firmly believe technology can be the danger that Heidegger suggests; many studies that focus on mobile media technologies go forth with this presupposition (see Myerson, 2001, for an example of an intersection between mobile media technologies and Heidegger's dystopian viewpoints). However, these technologies can simultaneously be a saving power for people because of the way the specific "marginal practices" used to operate them offers the unconcealment of worldly involvement. With tablets, and other mobile media technologies, a person has a unique opportunity to grapple with both the seen and unrecognised, as well as the spaces of their intersection. The significance of raising what appears to be at first glance a mundane feature of a person's everyday life is because it is in the everyday that a person confronts the immediate and the most familiar, and yet, the everyday is, simultaneously, mostly ignored or disregarded due to its banality, simplicity, and repetitive, cyclical nature. The everyday is, as Highmore declares, "the landscape closest to us, the world most immediately met" (Highmore,

2002, p. 1), and, as such, this landscape is crucial to understanding our most intimate experiences. The essential core of our being-in-the-world is the way we ongoingly orient ourselves to the world through embodied movement, to presence ourselves and be attentive to the way our marginal practices permit the phenomenon of unconcealment; such is the core of dwelling.

Notes

1. Ready-to-hand implies a *thing* available for practical utilisation understood within a network of other entities. Meaning arises in that the object possesses a practical use, but also because it refers to other objects with which it shares a relation (Heidegger refers to this as referential totality). Ready-to-hand stands theoretically opposite present-at-hand, a problematic way to examine entities for Heidegger because of the way with which entities are suspended and separated from Dasein's fundamental concerns (see Heidegger, 127, p. 102-107).
2. I prefer the word environment rather than 'space' because, as Tim Ingold notes, living organisms inhabit environments, not space; "space is nothing, and because it is nothing it cannot truly be inhabited at all" (Ingold, 2011, p.145). Ingold's proclamations against space draw influence from the logic of inversion. For Ingold, the logic of inversion "turns the pathways along which life is lived into boundaries within which it is enclosed. Life...is reduced to an internal property of things that occupy the world but do not ... inhabit it. A world that is occupied but not inhabited, that is filled with existing things rather than woven from the strands of their coming into-being, is a world of space" (Ingold, 2011, p. 145).
3. *In Being and Time*, Heidegger provides an ontological account of human being as Dasein, or 'being-there' (see Heidegger, 1927, p. 27-28).
4. When I use the term intentionality, I am referring to Heidegger's

interpretation, rather than Husserl's. See Dreyfus (1991, p. 61-69) for an overview of absorbed intentionality (Heidegger) as prior to representational intentionality (Husserl).

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The Tablet Book 6

John Farnsworth and Terry Austrin

Affective Mobile Devices

Tracing the Ties that Bind

Keywords: affect, relationships, mobile poker, SMS, publics

Introduction

Mobile devices are one of the fastest developing areas of the consumer electronics market. In May 2014, there were nearly 7 billion mobile subscriptions worldwide (Mobiforge, 2014). Almost one-quarter of the world's population used a smartphone at least monthly in 2014 (eMarketer 2014). By 2017, Forrester Research forecasts that 905 million users will own tablets, equivalent to 60% of US and 42% of European consumers (Arthur, 2013). Mobiles, in any case, are now tracked so

relentlessly that statistics about them are out of date almost as soon as they appear.

Usage of these devices is equally intriguing, because research shows behaviour around mobiles is rapidly changing social interactions and practices in Western and Asian societies (OfCom, 2011; Jung, 2013). Pew mobile research (2012) reports that not only do 67% of US owners check them without any prompts, but 44% now sleep with them next to their bed in case of a message. A recent multi-country study reveals more 3-5 year olds can navigate a smartphone than tie their shoes (AVG, 2014). Moreover, individuals "love" their mobile devices (Staples, 2013), so much so Google's chairman admits "tablet love" is changing how companies buy software and may lead to existing technologies being dismantled (Bort, 2013).

Such evidence suggests the acceleration of mobile uptake is reconfiguring both person-to-person and person-to-device interactions. This is the focus of the chapter: how to understand changing networks, sociality and affect across online worlds, and how technologies participate in this reshaping. Ironically, available conceptual frameworks to study these changes are also in flux, whether this is in the area of social science frameworks or theorising affect (e.g. Grabher, 2006; Kitchin and Dodge, 2011; Sheller and Urry, 2006; Wilken and Goggin, 2013; Verhoeff 2012).

For instance, phenomenological and ethnographic perspectives investigate the domestic space of the "sensory home" (Pink and Leder Mackley, 2011), where objects create experiences of living "*in* rather than *with*, media" (Deuze, 2007: 138). Other perspectives trace the way that persons, social space and mobile publics are produced by communicative contexts

that are instantiated, coupled and decoupled through interaction with particular devices (Sheller, 2004).

Similar ambiguities appear in the area of affect that we examine. Theorising affect itself is still relatively new (Clough, 2010; Greig and Seigworth, 2010; Massumi, 2002; Vincent and Fortunati, 2009). Affect itself is, by definition, volatile with its complex blend of emotion, feeling and bodily sensation open to varying definitions (Blackman and Venn, 2010). Yet, as we discuss, the collective distribution and circulation of affect that mobile devices mediate offers unusual ways to rethink the whole relationship between individual and network.

Our particular focus is on the strong attachment of humans to their devices. But 'devices' has to include the extraordinary range of apps and functions beyond the hardware themselves. Khalaf (2013), for instance, describes how more than a billion consumers are "glued" to both devices and apps, in ways that impact "nearly every aspect of their lives." Apps mobilize many attributes of being human – memories, notes to self, communication with loved or significant others, favourite music and audio, beloved games and much more – all through the profusion of image, text and sound devices available on any device.

Data such as these raise many questions. Amongst them, what counts as a 'mobile device'? We define mobile and smart devices as portable, featuring interactive touch screens, connectable to small keyboards and carrying a variety of miniaturised sensing and connection technologies (Watkins et al, 2012).

Mobility also raises questions of how the relationship between affect and devices can be approached. We adopt two related approaches. First, we

take a perspective that draws on relational psychoanalysis, in particular on the idea of emotional / affective objects. This allows us to consider mobile devices as transitional or self-objects: it highlights how individuals identify and develop ties with their devices so that these become, in effect, an extension of themselves. These intense, often hidden attachments begin to explain why nearly 30% of users consider their devices as "something they can't imagine living without" (Brenner, 2013). We discuss two types of ties, or emotional investments: one to devices and the other to the worlds – the connections – that installed apps open up.

Such worlds are the focus of our second approach, based on what Grabher (2006) describes as "rhizomatic metaphors." Drawing on the work of Michel Serres, we consider devices as quasi-objects: chains of electronic mediators that mobilize the ceaseless circulation of interactions between online and face-to-face domains. We go on to consider the nature of affective circulation and how the construction of sociality, through devices such as tablets, is always a provisional accomplishment. We describe this through the formation of publics (Sheller, 2004) and illustrate how these are mobilized in two cases: SMS friendships and mobile poker. Publics, in this context, are sociotechnical achievements; as Girard and Stark (2005, p.7) argue, "There is no public, no public assembly, without protocols and technologies – even if these are as simple as chairs around a table and everyday conventions of conversational turn-taking." All the more so when dispersed publics are assembled through chains of digital devices. We would also add, beyond Girard and Stark that, where there are publics, there is always affect, too.

Affective mobile devices, then, are key sites in the constitution of sociality because of the volatile, complex, sociotechnical interactions they bring into

being. In some ways, this returns our focus to devices themselves with their constant installation, updating and exchanges of apps and operating systems. All this in pursuit of better access to social networking, such as Facebook or Twitter, online gaming, p2p downloading, chat, streaming porn, Skype, online banking, travel navigation, airline booking, podcasts, online conferencing or any of the other myriad opportunities online networks afford. Each of these, we argue, responds to the hunger for the ceaseless connection and engagement that affective devices provide.

Affective, mobile self objects

Because of their protean connectivity, devices mediate an increasing range of social ties. In mediating them, they reshape not only how such ties are made but more: as Richardson (2005) argues, they can shape their owner's construction of meaning, sense of self, identity and modes of engagement with the world at large. We take this up by considering how devices constitute psychological object worlds and we draw on relational psychoanalysis (Mills, 2005) to trace the shifting dynamics of affect across devices and online worlds. Here, we consider mobile devices in relation to the idea of psychological objects. Objects are the focus of emotional investment and, as we outline below, they range from objects perceived as extensions of the self – self, or transitional, objects – to objects distinct from the self, that can be invested with the whole spectrum of feeling.

Self objects, developed in the area of self psychology, are commonly understood as objects which are not experienced as separate and independent from the self. They are persons, objects or activities that 'complete' the self, and are common to ordinary functioning (Kohut, 1984): they afford a sense of ongoing self-coherence. As Kohut (1984, p.200n)

comments, they "support the cohesion, vigor, and harmony of the adult self." A moving instance Parkin (1999) gives is of refugees who often transport personal mementos on their journeys that encode, for them, objects as reassuring reminders of familial security. In this context, mobile devices, because they mediate complex sociotechnical networks, are increasingly an important means of self-object presence and constancy. Transitional objects are similar and perform similar functions; as Donald Winnicott, the term's inventor proposed, these are objects with a me / not-me quality. He points to children's teddy bears or blankets that are intensively personal attachments, however stained, smelly or tattered they may be. They are, he suggests, subjective objects whose presence is soothing because they are felt to be part of the self yet, clearly, are materially distinct from it (Winnicott, 1953).

Both sets of ideas, self and transitional object, are part of a relational turn within psychoanalysis (Mitchell and Black, 1995) Recent neuropsychoanalysis suggests how these work in terms of emotional modulation between self and other (Northoff, 2011). However, such a perspective raises two issues. First, the idea of self-coherence is difficult to reconcile with the Lacanian / Deleuzian concept of protean desire or the anarchic excess of Bataille's affective materialism (Grindon, 2010). Second, because mobile devices are constantly changing and updating, it's sometimes unclear whether they enhance, or undermine, stability and self-coherence. We return to these issues below.

Quasi objects

The concept of quasi objects originates in the work of Serres (1982), and has since been developed by Latour, Callon, Law and actor-network theory. It describes how a process of translation is accomplished across human and technological worlds. Bryant (2006) describes the quasi-object this way:

> Quasi-objects are objects that are *neither* quite natural *nor* quite social. Like Deleuze's aleatory point, they are operators that draw people together in particular relations as well as drawing people into relations with other nonhuman objects while being irreducible social constructions in the semiotic in the humanist sense.

One of Serres's examples is the simple soccer ball. As he describes (1982, pp. 225-226):

> A ball is not an ordinary object, for it is what it is only if a subject holds it. Over there, on the ground, it is nothing; it is stupid; it has no meaning, no function, and no value. Ball isn't played alone … The ball isn't therefore the body; the exact contrary is true: the body is the object of the ball; the subject moves around this sun. Skill with the ball is recognized in the player who follows the ball and serves it instead of making it follow him and using it.

What this passage captures is the volatile process of mediation, where subjectivity is constituted out of the circulation of the ball and the precarious construction of the collective in doing so. Simultaneously, the act of passing the ball mobilizes affect, the fluctuating engagement and disengagement amongst members of the collective: their excitement, investment, skill – these relations all mediated by a material object. As Connor (2002) comments, "The quasi-object is a form of mediation which originally comes into being as a way of fixing or stabilising social conflicts which might otherwise tend to degenerate into absolute chaos, or all-out, all-against-all war." Participants, in this case, might fight rather than play. Psychologically, aggression is transmuted – Freud might say sublimated – into an enjoyable,

albeit competitive, game. In this case, as with an online mobile device, it is the mediator that organizes and transforms collective participation.

Likewise, in online worlds, sociotechnical mediators are guarantors against chaos or outright aggression by sustaining the flow of communication. Chaos ensues when digital networks fail and electronic mediators can't 'talk' to each other: this was the case with the long sequence of Christchurch earthquakes in New Zealand, with widespread, ongoing disorganization. Here, unlike the soccer game, there were many mediators in play, not just a single ball. These involved dense chains connecting users' fingers on a screen or keyboard that was meant to exchange data across cell towers and digital networks and onto distant mobile devices. Aggression in these contexts often emerged as unmediated frustration (Kohut, 1989) with attacks, abuse or destruction directed against the offending, unresponsive technology that failed.

Destructive impulses define the difference between object and transitional object. The psychoanalyst Donald Carveth illuminates this in relation to Winnicott's work on destruction. Destructive fantasies enable the move from a 'subjective object', in Winnicott's words, to an unmerged, separate object (what Winnicott [1971, p.71] describes, a little confusingly, as an object 'objectively perceived'). The separation is realized when an actual object is found to have survived the intense destructive wishes directed against it. As Carveth (1994) comments, it highlights the shift from "objects as extensions or projections of the self, to…the object is recognized as separate and distinct from the self."

The object as a projection of the self can be consoling, soothing or cohesive. But, to provide this, it must itself be protected. This, perhaps, is why mobile

devices are so widely perceived as necessary, precious and even addictive. Conversely, the object recognized as separate to the self can be worn out in the pursuit of satisfactions, in such relentless activities as gaming or teenage texting. In practice, subjective objects and object-usage exist side by side, oscillating constantly as either quiet or excited experiences. These experiences are laid down from infancy, as Winnicott (1945, p.151) eloquently describes:

> ...There are the quiet and the excited states. I think an infant cannot be said to be aware at the start that while feeling this and that in his cot or enjoying the skin stimulations of bathing, he is the same as himself screaming for immediate satisfaction, possessed by an urge to get at and destroy something unless satisfied by milk. This means that he does not know at first that the mother he is building up through his quiet experiences is the same as the power behind the breasts that he has in his mind to destroy.

In short, there is a constant interweaving from the imaginative and symbolic to the material-sensuous realm. The constant interplay of imaginative worlds realized through tangible objects also links quasi- and transitional objects, whether it is a soccer ball or digital device. It is the interplay that creates the magic of experience, as anyone absorbed in an interactive game online can attest. The magic is assembled from both quiet engagement and excited manipulation with keys and touch screens, whether this is the destructive delight of *Plants versus Zombies*, the quieter interaction with *Suzie's Sushi* or the reverie of a podcast. Each involves different forms of play, aggressive, exploratory or affectionate (Pellis and Pellis, 2009).

Yet, affective flow creates another problem: the issue of stabilization. Stabilization is critical because as Latour (1992, p. 15) comments, "Quasi-objects may alternate and become objects, or subjects, or quasi-objects again or disappear altogether." At issue here is how the constant movement from stable to unstable takes place and can be tracked. In many respects, this is identical to the interplay of objects and relationships that constitute online worlds (Knorr Cetina, 2001).

Savage and Law (2010) address this by emphasising quasi-objects as assemblages or dispositifs. Dispositifs combine "apparatuses, inscription devices and their agential capacities" and foreground a posthuman perspective on digital devices as observing and following "activities and doings – often, but not always or exclusively those of people" (2010, p.10). They argue this enables the stabilization, by tracking and recording, of digital traces produced by streams of "loyalty cards, online purchasing, blogs ... government administrative databases, patents" and much else (2010, p.10). Together, this "tracks the doing subject," a point we return in relation to the panspectric below.

Ruppert, Law and Savage (2013) suggest this produces dilemmas for social science in how it follows digital subjects. They argue that the social science apparatus is not distinct from the world it investigates, particularly because it draws on the same digital technologies. As Stiegler remarks, "all members belonging to the milieu participate in it and are functions of the milieu" (quoted in Venn et al., 2007, p.335). Lash (1999, pp.276-277) makes a similar point:

> Where not only social scientists, but all of us are object trackers. Whether when net surfing or 500-channel surfing, we uncover

> the hypertext, or open the doors and the drawers in interactive graphics on CD-ROM. In each case at issue is not so much representation or the symbolic, but information and sending. We trace the network through the Web site. There is neither aurality (the symbolic) nor vision (the iconic), but tactility, indexicality at the heart of the signal and the information economy. Not only do we track the objects, trace the networks. But … the objects can track us. The networks can be our prisons.

Transitional objects and object usage

How does all this translate into actual digital practice? Always, we are confronted by the fluctuating interaction between affects, actants, stable and unstable entities.

'Quiet' experiences involve all the ways users make a tablet into a self-object: an extension of themselves. This is through personalization and customization: making devices just the way they want them. Apps, ringtones, wallpapers, covers, launchers and anything that add to the device's adornment. This includes the device as fashion or fashion statement (Sugiyama, 2009). Yet the look of a device: its sleek surfaces, its sheen and contours all contribute to the narcissistic extension of self that is typical of a self object (Woodward, 2011). So are usages that involve limited interaction: listening to podcasts or audiobooks, using drawing programmes or any activity that contributes to an absorbed experience of reverie and contemplation.

More involved, or 'excited', experiences involve object usage and, consequently, interaction with others. This ranges across all the whole spectrum of online activity: social media, interactive gaming, online

collaboration through conference software, Skype, streaming audiovisual software, and much else. Each of these involves circulation, with the collaboration of numerous circuits and assemblages of sociotechnical mediators, many assembled on the fly. Online conference software is a typical instance. Popular current technologies, such as webEx, Sync. in, Twiddla or Vyew enable participants not just to view or talk to each other across multiple screens; participants can also view and annotate documents in real time, share drawing and doodling tools, access calendars and scheduling apps, take control of slides or PowerPoint, record their exchanges and save files in cloud systems for later reference.

Many of these activities involve a constant oscillation of states from quiet to excited. Each is always translated through innumerable chains of mediators connecting online collaborators to each other. Consequently, every dimension of interactional dynamics differs to face-to-face exchanges: tempo, volume, screen size, data repetition, participant overlaps, along with gaps, glitches, interruptions, network 'hangs' and breakdowns; all these shape online affect and dynamics. A notable illustration is Distributed Immersive Performance: real time audiovisual performances of chamber music. Performers are geographically dispersed, yet their precise musical coordination takes place through high speed servers and is transmitted live to an auditorium. The servers synchronise microscopic time delays, achieving precise, affective attunement amongst the players (Chew 2010, Chew et al. 2005). The result reproduces the 'quiet' reverie, phatic communication and collective engagement of the concert hall. The contrast is a bad Skype day when one's loved one is marooned out there, somewhere, in cyberspace and no connection ever eventuates. Users rarely describe this as a quiet experience.

Many of these examples, however, are not peculiar to mobile devices; they can be experienced on any digital screen. What is peculiar is the documented, expanding attachment to mobile devices. This is especially so with smart devices. According to Hartland (2011), for instance:

> On average, Americans spend 2.7 hours per day socializing on their mobile device. That's twice the amount of time they spend eating, and over one-third of the time they spend sleeping each day.

The attachment to smart devices now spans virtually every domain of life: the average tablet user spends 90 minutes per day on their tablet; 88.3% of tablets are used on the road; 35% are used in the bathroom (staples.com n.d.). Bafflingly, 12% of American adults even manage to use their smartphone whilst showering (Elizabeth A, 2013). According to Jumio (2013), 19% of Americans use their smartphones in church, and 9% during sex. They also report considerable anxieties around losing their phone, ranging from concerns about theft (65%) to others using their mobile payment options (26%). There is even a 'condition', nomophobia, for the anxiety of mobile disconnection (Quinion, n.d.).

Devices and flows of affect

The key point is that devices both produce and secure flows of affect and forms of sociality across whole human populations. This is identical to the way that the soccer ball, for instance, creates flows and circulations of collectives. Devices do this through the dense clusters and arrays of mediators – chains of mediators that can be constantly assembled and reassembled when new technologies, new apps and new kinds of social media appear. This takes place at both molar and molecular levels, from the

integration of new hardware devices – smartphones carry at least seven kinds of RF and sensing devices – to new software such as screen launchers, or programmes that 'root' devices enabling increased user manipulation of their device. Yet each of these innovations attaches the user more strongly to their device because of the access and interaction it allows.

Devices, for instance, are central to profuse forms of affective flow. These are in both intended and unintended ways. They include the instantaneous spread of information, ideas, trends, fashions and fads where YouTube videos or Facebook posts suddenly go viral. It is the constant in the distribution of music, video, chat and news endlessly reversioned across devices. These enable ephemeral publics ceaselessly to emerge and evaporate. This can be intentionally, through flashmobs or webmobs (Nicholson, 2010) or through marketing (Marwick and boyd [2010] describe Twitter audience management practices of 'micro-celebrity' and personal branding).

Whatever the case, users need to be 'always on', so that they are connected to these affective flows and the unfolding social worlds they mediate. In this sense mobiles, because of their portability, aren't merely extensions of their users; users become extensions of their mobiles.

These phenomena call up the way such fluid, often unforeseeable, affective flows and sociality are patterned or organized. This has generated sizeable literatures in two domains. One is the area of electronics and emotions which, as Garde-Hansen and Gorton (2013, p.14) summarise it, includes not only feminist theories of emotion but 'literature from television and film studies, as well as cultural studies of technology, globalization, online media, and the Internet'. It also extends to emotions and computing (Vincent and Fortunati, 2009), the huge field of affect and mobile phones (Dixon, 2011),

or broader areas such as phenomenology and mobiles (Richardson, 2005) to name just a few domains. We cannot hope to do justice to this huge range of research. Instead, we turn to a second, also extensive literature, on networks and the formation of publics. We do so to show how affect is translated through the conjunction of individuals and technologies into stable and shifting sociotechnical constellations.

Affective mobile publics

Smart devices highlight attachments to an individual (Vincent, 2010). How, though, do we describe collective, affective interaction? One approach is to draw on network literature. In particular, to foreground the ties that link members of networks together. Ties can be understood as a form of attachment between individuals that binds them into collectives: it implies an emotional component beyond the purely instrumental (Goodwin, 1997): ties of loyalty, belief, kinship, affiliation, identity and more. Yet, as Mische (2008, p.1) notes, when we go on to ask about "types of tie," as Harrison White does, it "opens the door into a host of complex processes which lead us quickly into an engagement with culture and interaction." It also opens up the question of the kinds of publics, ephemeral or sustained, that affective ties bring into being through sociotechnical networks.

For instance, Loosen and Schmidt contrast the familiar notion of Habermas' (1989) public sphere with "issue publics" found on Twitter or the "personal publics" of Facebook "where people share personally relevant information with the rather small audience of their social network" (2011, p.7). This is similar to boyd's (2010) more sociotechnical concept of networked publics: an "imagined collective that emerges as a result of the intersection of people, technology, and practice." Germann Molz and Paris (2013) document networked "flashpacking" where devices enable backpackers to connect

and disconnect on the move. Ikegama (2000, p.997) follows Harrison White to argue that these are instances of mobile, multiple publics, which can be durable or ephemeral, forged out of interaction rituals. These are "communicative sites" created as "the switching-connecting and decoupling of networks" takes place.

One instance is how smart devices broker friendships. They illustrate what White's "type of tie" means in practice. As Mische (2008, p.1) comments,

> When we talk about the relations commonly examined by network analysts – such as friendship, respect, advice, collaboration, or opposition – this begs the question of the meanings and interpretations associated with such ties – for example, what in fact constitutes friendship?

She continues:

> since friendship may be only one out of multiple ties that I share with you, how do I signal performatively, within a given interaction setting, that now I'm speaking as a friend as opposed to a client, co-worker, supplicant, challenger or authority? How do I switch between the multiple ties that may compose our relationship, while moving within and between social settings?

Smart devices facilitate exactly such interactions. Tablets, for example, allow seamless interfacing between on- and offline worlds because of their portability. They also enable what Mische (2008) describes as communicative styles across diverse settings. For White (2008), "styles" mobilize a whole range of publics across text, audio and video communication. Classical

music videos on YouTube, for example, assemble small global publics through diverse styles: posting, utilizing 'likes' and emoticons, links, marked-up videos, alternative uploadable selections and comments that can run into the thousands.

The same is true across SMS sites, from Twitter to Reddit; each with its differing types of tie, switching and styles of affiliation (Twitter has following and retweeting). Each also provokes enquiry about how these sociotechnical interactions are performed, including Mische's (2008) question: "what constitutes friendship?" This is particularly salient in the case of Facebook where 'friending' now has complex rules and etiquette (Mitchell, 2013) each vividly illustrating the styles, affiliations and skills required to negotiate online communication and memberships of ephemeral publics. As Grabher (2006, p.21) puts it, drawing on White (2002):

> The polymorphous character of social relations flows from the capacity of actors to maneuver across multiple social contexts by coupling and decoupling, that is tightening and loosening relational ties.

By extension, Grabher argues, (2006, p.21) individuals become "nodes of story condensation and identity that occur at the interface between multiple networks." Individuals navigate, according to Mische (2008, p.3), by "conversational footings" that are "fluid, shifting and manipulable through what Goffman calls 'keying' practices, in which actors signal – semantically, gesturally, grammatically - which frame or definition of the situation is being invoked." Keying invokes specific relations between actors such as "friendship ties, shared memberships, relations of deference, familiarity, or respect" (Mische, 2008, p.3). Consequently, these performances "have a ritual as well

as an instrumental component; ties must be strategically represented as well as solidaristically affirmed." Across networks, these constitute what Harrison White defines as "social goos, shards, and rubbery gels" of publics that are constantly forming, dissolving and intersecting (White, 1992, p.337; Sheller, 2004).

Such dense conceptualization typifies the work of the New York School of network theorists (Mische, 2011). As Grabher (2006) emphasizes, the School's work is part of a complex set of disciplinary discourses; together, these reconfigure how networks, institutions and markets can be understood. Where smart devices are concerned, Grabher's review also highlights "the postructuralist rhizomatic metaphor:" "a multiplex, heterogeneous and robust web of relations" characterized by the work of Deleuze, STS and actor network theory (Grabher, 2006, p.4). Like White's goos, shards and gels, this metaphor emphasizes "more fluid and incoherent relational ties" (Grabher, 2006, p.4). Yet it also differs sharply to White's work because it foregrounds what network theory doesn't: the significance of technologies and chains of mediators in assembling ties and networks in the first instance.

Put another way, rhizomatic metaphors are a good way to identify and track volatile, emergent, unpredictable networks by tracing their "multidimensional and constantly evolving entanglements" (Grabher, 2006, p.16). Likewise, such metaphors enable networks to be viewed as "detachable, reversible, susceptible, to constant modification" (Deleuze and Guattari 1988, p.12). This is in contrast to "the rather clear-cut view on network formations in the governance and the social network approach" (Grabher, 2006, p.16).

Network theory also neglects affect, a difficulty Goodwin and Jasper (1999)

acknowledge. As Scheff (1994, p.282) remarks, its descriptions of collective movements "note (their) passion, indeed the very pages crackle with it. But these descriptions do little to conceptualize, analyze, or interpret it." Separately, Grabher, like White, overlooks how central technologies are to the rhizomatic perspective, particularly in actor-network theory.

Rhizomatic perspectives, then, allow us to link devices, affect, publics and collectivities; they are particularly promising where mobile devices are concerned because they suggest how we might trace fluid interactions between face-to-face and online worlds. Ruppert. Law and Savage (2013) suggest this is precisely what commercial and marketing organizations do – ceaselessly tracking sociotechnical ties to assemble and anticipate consumer behaviour. We illustrate this through the case of online poker.

Poker publics and mobile worlds

Poker is a remarkable instance of affective sociotechnical collectivities in play (Austrin and Farnsworth, 2012; Farnsworth and Austrin, 2012). A massive market, worth $US4 billion in 2011 (bwin.party, 2013), it is available on all forms of fixed and mobile screens, illustrating how the original face-to-face game has been intricately translated into digital mobility through new chains of mediators. These have shaped its amateur participation and professional organization, its diverse forms of spectatorship, celebrity management and globalization as a popular entertainment. Mediators include miniaturized cameras, RFID devices in cards and chips; broadcast, online and mobile forms of the game, avatars and poker bots that routinise and automate play. Mediators are also aligned with a range of new surveillance and data devices that assist players to access a vast array of existing poker hands and playing strategies, and regulators to track illicit play. YouTube offers detailed tutorials and links by stars on all forms of the game, from low-stakes to high

roller play. The same practices are increasingly enrolled by other sports, including chess and bridge.

New mobile developments for Android and Apple devices enable rapid-play Rush Poker or allow players to manage four online tables simultaneously (888Poker, n.d.) whilst industry forecasts suggest mobile devices will be its future, as casualised global participants supplement the large cadre of regular players (pokersites.com, n.d.).

Mobile and online poker play constantly illustrates switching: here, between publics as players or spectators, assembling endlessly around new virtual tables, tweeting results to fans or backers, or bragging in chatrooms. The formation of publics is continuous and overlapping, from the actual card play to the on- and offline reporting, celebrity tournaments, monetization and relentless marketing by such huge online casinos as PokerStars.com.

Poker is also a blend of calculation and affect because of its risks and rewards. Affect is central, whether it's through the fear, the adrenaline rushes or the suspicious reading of others' 'tells': the emotional signs they give off through subtle body language. Palomaki et al (2013), for example, report on 'tilting' in Finland – the emotional dysphoria experienced after losing:

> Tilting, in the narratives, was often instigated by dissociative feelings ('unreality', disbelief) following a significant monetary loss. Thereafter, moral indignation was experienced, followed by chasing behaviour, in an attempt to restore a 'fair balance' between wins and losses. In the aftermath of tilting, self-focused feelings of disappointment, depression and/or anxiety, and sleeping problems were experienced.

This is the stuff of 'bad beats', the roller-coaster of feelings that accompanies poker play on- or offline. In the case of tilting, Palomaki acutely illustrates how a player's draws on a variety of psychodynamic defensive manouevres to manage the shifting balance of euphoria and dysphoria: amongst them, dissociation, moral outrage and 'chasing' behaviour. Yet, these defences fail to overcome the crushing lows he goes on to describe. On the contrary, they are intensified in poker's sociotechnical arena: the shifting publics of tweeters, Facebookers, television spectators, bloggers and online commentators can amplify the scale of loss.[1]

Poker exemplifies social interaction across the Internet: it illustrates the typical dynamics that unfold wherever there is online commentary and participation. Psychologically, it highlights how the 'excited' transitional play described by Winnicott shapes the intense experience of the game. 'Quiet' affective experience may emerge later: reflecting on hand play, statistics or strategies of the game. In either case, affect is generated through the translation, circulation and exchange of material, social and emotional objects. These ceaselessly rework the game, its publics and its attractions in new ways.

A final point. Poker relies on pattern recognition and computer–assisted predictions of future behaviours to secure its markets. Yet, this is identical to what Kullenberg and Palmås (2009) report with 'panspectric' corporations from Google to Heineken or Walmart. Like poker firms, these corporations function in a similar way, being based on 'tracking and periodically initiating consumer enthusiasms' (Barry and Thrift, 2007, p.519). Not only poker, but tablets, smart devices and apps, assemble carefully coordinated consumer enthusiasms. As Kullenberg and Palmås

(2009) argue, they 'inject' and manage contagion by 'panspectrism': through ceaseless marketing and tracking, and by the endless near-replication of new devices and software.

Rhizomatic extensions

Whether in friendship or poker, rhizomatic perspectives recall Serres' emphasis on how quasi objects create unpredictable forms of circulation. When coupled with Latour's recent emphasis on the work of Gabriel Tarde, they also offer a way to open up the role of affective devices further. Partly, this is by drawing on Tarde's (1903) work on imitation and contagion: this work moves beyond the bounded domains of networks to the proliferation of crowds and affect. Imitation, for Tarde, always contains 'a potential surplus', allowing 'an event or an action to deviate into invention' (Barry and Thrift 2007, p.517). Rhizomatic perspectives also draw on recent work in affect and phenomenological studies (Richardson, 2010). For instance, Blackman (2012) takes a radical position of 'immaterial bodies' that are far from stable entities but processes:

> we might instead talk of brain–body–world entanglements, and where, how and whether we should attempt to draw boundaries between the human and non-human, self and other, and material and immaterial.

The implications of this position are considerable:

> The human body is potentially displaced, extending our concern with corporeality to species bodies, psychic bodies, machinic bodies and other-worldly bodies, for example. These bodies may not conform to our expectations of clearly defined boundaries

> between the psychological, social, biological, ideological, economic and technical, and may not even resemble the molar body in any shape or form.

Networks, on this view, are inherently processual, dynamic and volatile along with the diverse (im)materials that mediate them. Centrally, this is a metaphor of the affective translated to the whole sociotechnical domain. Emerging technologies are likely to translate these through new wearable and haptic devices, RFID sensors, MindMesh, synaesthetic devices, Google glasses or Siri voice technologies (Mann, 2013). Smart devices become one kind of passage point through which affective flows circulate, distributed through hardware, apps and electronic networks, as well as mediating online and face-to-face ties. As we suggested, this also indicates how closely all these exchanges are tied to a panspectron, particularly a corporate one, in monitoring and managing cycles of emergent contagious enthusiasms. Moreover, this perspective emphasises how existing smart devices – whether tablets or smartphones – are just one moment in the ongoing development and miniaturization of devices, as we suggested in the introduction.

Conclusion

One of us is travelling with friends through Los Angeles, with their 11 year-old in the back seat. Her fingers are flying across my borrowed tablet screen of *Fruit Ninjas,* enthusiastically slicing multiple fruit combinations to shreds as the city slides by outside. Occasionally, I'm asked to admire her latest score before her pleas resume for more additions to the groaning collection of *Cake Baker*, *Subway Surfer*, *Angry Birds* and other apps crowding out my Office software. No longer does my tablet belong just to me. Earlier, we and her toys have all featured in her home videos, shot on my tablet and uploaded to a cloud site for her to edit and distribute. Of course, she is

oblivious of the corporate panspectron surrounding these activities, though it shapes the reality and worlds she's engrossed with.

A large part of our focus in this chapter has been on objects. Yet, an 'object' turns out to be not just a material object, such as a smart device, but an ongoing, shifting assemblage of socioemotional and sociotechnical objects. As Law and Singleton (2005, p.343) argue:

> we cannot understand objects unless we also think of them as sets of present dynamics generated in, and generative of, realities that are necessarily absent … In this way of thinking, constant objects are energetic, entities or processes that juxtapose, distinguish, make and transform absences and presences.

'Objects', then, shape realities, even for 11 year-olds. They are stabilized, often temporarily, in the form of current consumer items: tablets, phablets, smartphones, apps, and their array of internal miniaturised technologies from cameras to sensing devices. It is this ceaseless assemblage that enrols them and enables the flow of desire to circulate, as quiet or excited states, or be translated into the myriad of interactive purposes across internet connections. This produces, as we've suggested, the formation and switching between shifting arrays of publics, themselves temporary or stabilized in different ways. Each of these provisional assemblages is prone to the oscillation of constructive and destructive desire, whether through the remaking of social ties, the organization of criminal economies (Friman, 2005), the formation of public spheres, the viral circuits of celebrity or gossip, the intensifying regulation and surveillance of citizens, even the creation of malware, or the ongoing design of internet architecture that mobilizes this online activity in the first place.

Notes

1. Albarrán Torres (2013, p.38) details a scenario, typical in casinos, of gambling machines or 'pokies'. Here, gamblers and EGMs 'suck on each other's nipples' forming 'an intricate mass of "assembled desire"'. These couplings, he argues, function as desiring machines. Attachment, on this reading, constitutes a total sociotechnical merger.

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The Tablet Book 7

Susana Tosca and Helle Nina Pedersen

Is There a Text in this Tablet?

Keywords: tablet, reading, electronic text, e-text

Introduction

More and more people all over the world are reading on tablets. In 2013, 44% of Danes owned a tablet,[1] and were doing all or part of their reading on their new devices. Cultural commentators such as Gomez (2008) and scholars such as Piper (2012) have been quick to explore how the digital revolution is changing the media ecology and how changes in the materiality of media have always shaped the way we read. An often-missing dimension in much of the literature about e-reading is the point of view of the readers

themselves: how do regular readers experience e-reading? How do they feel it is similar and different from paper reading?

Investigating the experience of readers was the motivation behind our conducting a multi-method empirical study about new e-reading practices in 2012, which forms the basis for this chapter. Our enquiry focused on the changes in the reading situation brought about by the widespread adoption of tablet reading devices (mainly iPad and Kindle in our study). Here we concentrate on the issue of how the new communities of tablet readers relate to their texts, as attitudes towards the value and use of texts are changing, generating questions of ownership, unstableness and authenticity.

We approach the subject from a literary theory/cultural studies perspective, contrasting the insights obtained in the analysis of our in-depth interviews with readers with relevant theories of electronic textuality. The title of this chapter was inspired by Stanley Fish's famous 1980 book, *Is There a Text in This Class?,* which argued that communities of readers determined the expectations, habits and interpretive strategies available to each individual. In the same vein, we wanted to interrogate the idea of text that our e-readers share, to see what affordances it allows for and how it plays with the actual evidence of use/reading reported by the same readers.

A Note on Method

Our 2012 study comprised a quantitative questionnaire, qualitative interviews with ten selected readers, observations, usability tests and other content analyses of documents, websites, articles, literature and press releases. Our initial hypothesis was that describing tablet reading as a practice would be facilitated by using book reading as benchmark. Readers would find it easier to reflect about their new experience by comparing it with the old.

Our starting point was the survey, a quantitative questionnaire about tablet reading practices that yielded 105 responses. It was aimed at gathering information about the characteristics of the tablet reading population so that afterwards we could make a selection of respondents for in-depth interviews. A link to the survey was posted on our university website, published in several Facebook tablet-interest groups and also sent to several important public libraries in different Danish regions. The interviewees were thus self-selected, as people with an interest in tablet reading as well as a certain e-reading experience.[2]

In a month, 105 people had responded to the survey, and from those we selected ten to conduct in-depth face to face interviews. At the moment of initiating our research (February 2012), there existed no precise data about the demographics of Danish tablet owners and readers, so we developed our own selection parameters based on other statistics[3] that describe reading populations in the Nordic countries. We strove for a slightly higher female representation (6 female to 4 male) in accordance with the given statistics, which indicate that around 25% of all men and 40% of all women (an average of all Nordic countries) read daily. We also chose varied income levels and different degrees of expertise pertaining to the adoption of new technologies.[4] The interviews were conducted at the IT University of Copenhagen in the period between 30 March to 25 June, 2012. The average interview lasted around one hour of talk focused on tablet reading practices. We used an open question guide that allowed interviewees to steer the conversation and focus on their areas of interest. Later we transcribed all interviews and analyzed them.

A rich number of topics emerged in our analysis (about the materiality of the experience, interaction and usability, the cognitive engagement with

texts, the relations between readers and readers and authors, etc.). Our focus in this chapter is the nature of the electronic text as conceptualized by readers. We have translated all quotes in this chapter from Danish to English; when referring to interviewees' statements, "i" refers to the interviewee number, and the second figure to the page of the transcription where the quote can be found; thus "i3, 5" means: interviewee 3, page 5.

Some of the related results of the study concerned with the materiality of the new reading praxis have been published already (Tosca and Pedersen: "Tablets and the New Materialities of Reading", 2014) or are awaiting publication (Tosca: "Dreaming of eReading Futures", forthcoming). In these articles, we have described how the dichotomy of tablet/electronic text dominates our interviewees' discussion. It is a dual object that foments contradictory associations and meanings. On the one hand, our readers are fascinated by the endless capacity and portability of the tablets themselves, those hard closed objects that are as closely linked to our persons as our bank accounts. Tablets are not single texts, but whole libraries. The reading platform becomes a network connected to the world instead of a fixed inscription of a particular text. This is both immensely valuable (the most used adjectives in relation to tablets were "smart" and "genial"; it was also "the most practical thing ever") and slightly awe-inspiring ("it is an incredible invention, nearly magical; it saves time, space and the Amazon forest, wow!" (i1,7).

On the other hand, as we detail in our two other articles, the incorporeal nature of electronic texts bothers our interviewees. They report accessing content in the same way (with the same degree of concentration and engrossment in the act of reading), but they miss a lot of material features in the electronic reading experience: spatial memory, annotation, displaying

their books in a shelf or the possibility of lending them out to friends, (Tosca & Pedersen, 2014; Tosca, 2013)

In what follows, we introduce the concept of "electronic text", and then we present the results of our analysis, with a focus on the nature of the new (tablet) electronic text as characterized by its readers.

Electronic (Tablet) Text

The Oxford dictionary doesn´t have an entry for electronic text, or e-text, but it does define "e-book" as: "an electronic version of a printed book which can be read on a computer or a specifically designed handheld device". Our interviewees not only read books in their tablets, but also short stories, new "tablet genres,"[5] articles in PDF and even personal documents, so we decided to use the more general "e-text" to refer to the content of tablet reading, because it comprises all these different forms. Electronic text as we understand it would thus be text read on a tablet (or a computer), (that is, not printed), regardless of the way it was conceived. Some e-texts are electronic versions of previously existing printed texts, and others are created specially for the electronic platform.

In the 1990s, academic discussions about electronic text centered around the new possibilities of the networked form, mostly within the paradigm of hypertext (Bolter, 1991; Joyce, 1995; and Landow, 1992) or cybertext (Aarseth, 1997). Even though these early works had a strong focus on writing, they are all concerned with the new kinds of reading that the digital form will afford. Their pioneering work fuelled the interest of many more scholars, who have since worked with interactive formats of various kinds. One landmark was the foundation of the Electronic Literature organization in 1999, whose website defines electronic literature thus: "Electronic

literature, or e-lit, refers to works with important literary aspects that take advantage of the capabilities and contexts provided by the stand-alone or networked computer"[6] (emphasis their own). Katherine Hayles comments on this definition and expands its implications in her well known *Electronic Literature: New Horizons for the Literary,* where she writes that "electronic text remains distinct from print in that it literally cannot be accessed until it is performed by properly executed code" (Hayles, 2008, p.5).

From the beginning, many electronic texts scholars shared an optimism around the new textual form, that was hailed as a liberator from the tyranny of linear formats. There was at the time a desire for change, as summarized in this quote: "We are faced with a medium that promises to increase the dynamic nature of reading exponentially with texts that actually, physically change from reading to reading, with a range of choices and reading decisions that seem to offer readers an autonomy undreamed of in their experiences of print narratives." (Douglas, 1992, p. 140)

But even though electronic literature flourishes still as a minor but lively genre[7], it has not become mainstream by any means, so the medium revolution hasn't happened yet. Douglas' networked, multi-threaded text that takes advantage of the capabilities of the computer has nothing to do with the content of our current tablets. Most tablet owners have never heard of *Afternoon* or kinetic poetry. For them, electronic text equals the last Stephen King blockbuster or a free Jane Austen PDF downloaded from the web.

At a first glance, these two interpretations of the concept of electronic text have little to do with each other, but we compare them here because the emergence of electronic literature in the 1990s was often associated

with a discourse of instability and fragmentation that resonates with the experience of electronic (tablet) text reported by the readers we interviewed.

One of the most lucid approaches to the new kind of text was Jay Bolter´s *Writing Space,* which introduced the idea of a fragmented book, mostly thinking of hypertext. His book also has lengthy sections about the history of writing as a technology, and how the formats that we take for granted today are the product of many years of evolution. In this context, his sharp characterization of electronic text as a disruptive force in the history of writing technologies is very useful to our purposes, as he is very aware of the strangeness introduced by the immateriality of electronic text: "an electronic text is not a physical artifact" (1991, p. 7). Getting used to the ghostly words on a screen is difficult for those raised in the late age of print, be they writers or readers, because "we have come more and more to anthropomorphize books, to regard each book as a little person with a name, a place (in the library) and a bibliographic life of its own" (Bolter, 1991, p. 86).

For tablet readers, the individual, anthropomorphized books should nearly be a thing of the past, as they do indeed interact with electronic, non-physical text on a daily basis. However, they miss the feel and weight of the paper books, and worry about a world without shelves, even though they declare themselves ready for the immaterial text: "the (printed) books around us, it is just nostalgic (...) we have to leave them behind and go into the books, the contents, that is what is important, right?" (i10, 14). Our interviews are rich in sentences like this, near declarations of alliance with the new formats, uttered with a share of anxiety, often looking to the interviewer for reassurance.

Our readers show a wish to interact with essence only, a desire for abstraction and a belief in the innate superiority of content over form, "the important thing is the text, we just have to get used to it" (i6, 9); "you can't turn back time, there are so many things happening right now, this is just a little bit of it... all the other media we use today... you have to adapt and hop on the bandwagon, right?" (I2, I I). Most respondents refuse to characterize the new kind of (electronic) text as anything special or different, "the context is the same; this contains just more books but the words are the same" (i3, 3), or "I don´t read them differently, my memory and comprehension are as they always are" (i7, 5). For them, the hardware (tablet) is obviously the new thing, but when asked directly about the e-text, the most common response is that the content is "the same," and it shouldn´t matter much if it is printed in a book or shining on a screen. However, throughout the interviews, e-text is implicitly characterized in various ways that relate to the textual re-configurations proposed by George Landow in his seminal work, *Hypertext,* from 1992, as we will see below.

Landow dedicates chapter 3 of his book to the topic of "Reconfiguring the Text". In its *Hypertext 3.0* version (from 2006), this chapter begins as a dream that reminds us of Vannevar Bush´s genial vision of the Memex: "in some distant, or not so-distant, future all individual texts will electronically link to one another, thus creating metatexts and metametatexts of a kind only partly imaginable at present (…)" (Landow 2006, 69).

In one way, those times are here already, as all texts are accessible and downloadable from our tablets. But they are not meaningfully connected to each other in the way both Bush and Landow longed for, which was a sort of digital manifestation of the abstract intertextuality inherent

to any text. The existing hypertexts examined by Landow look more like a classical edition of a literary text, with paratexts built around it (a dictionary, illustrative images or links to encyclopedic information about places, people and literary movements). The status of the classical text is in Landow's book challenged by fragmentation (the destruction of the classical linear structure of texts, the loss of sequentiality), the inclusion of visual elements, dispersion (text linking to texts by other authors), and the multiplicity of beginnings and endings (among other things) (Landow 2006, p. 69-124). What these qualities share with the electronic (tablet) text of our study is a sense of instability, of something escaping control.

Landow proposes the idea of a general "weakening of the boundaries of the text" (2006, p. 116), and we would like to take this as a starting point for the analysis of our empirical material. Electronic (tablet) texts are unstable, but not for the same reasons envisioned by Landow (and having to do with hypertext), but for others that we will explore below, inspired by his theoretical endeavour of explaining how the text is reconfigured. What is electronic (tablet) text like?

E-Text is immaterial

We can touch the tablet, "the cold machine" (i10,12), feel the lean design of its buttons. We can put it in our bags, hold it in our hands and feel its weight. We can connect its plug in the socket, and wait for electricity to power it. "It does look like a book" (i8, 10), but this same comparison contains the idea that if it *looks like* something, it cannot *be* that something, in this case a book. "There is something cold over the tablet, indeed, but you need to get into the text, that´s the important thing. To remember that it is a tool, a tool to get to the information. If you can abstract from the fact that it is not as pleasant an object as the book, then all the rest is

better" (I10, 14) But what is all the rest? It remains curiously undefined. The tablet is always something else, an empty receptacle of texts.

We cannot touch the e-texts. In printed books, the text is forever fixed to the physical pages, and even though print text is also an abstraction that has to *become* in the act of reading, just like e-text, it does exist in a material form. It has merged with the book that holds it. By contrast, we can see e-texts through the screen, but they are not the screen. They are fickle, change at every touch of our fingers and sometimes we have to look hard at them to make sure that was really the page we had got to. Readers report a moment of mistrust when turning the tablet on, until the text appears; "you have to get used to it, there is the text, and touching it is not possible, I cannot relate to it just with my hand, I am not yet used to flipping my wrist, it´s still a clumsy gesture" (i4, 8). With no physical reference of how long you have gotten into the book (no pages between your hands, no donkey´s ear), how to be sure that the machine remembers and displays the correct page? Of course we know the machine knows, but turning it on makes the world of the text suddenly appear from out of nowhere, and we jump into it without a warning, doubtful as to its reality, "I have no sense of orientation and basically just have to learn to trust the screen" (i5, 9).

We buy the texts, we download them and readers flinch at the prices, think that e-books are too expensive because "you cannot have them on your shelf anyway" (i7,2) Their immateriality is an obstacle to successful sales. All of our interviewees said that they paid for all downloads (they refuse to download pirate content), but that they feel slightly taken advantage of. The prices are too high as compared to the prices of physical books; even though, they try to understand: "we probably just have to learn to

think of a digital download as a physical thing, but it will take a whole society change because things you can touch and feel obviously seem more valuable" (i5, 6).

The untouchable e-texts disappear from our conscience as soon as we have read them. They are not displayed on our physical shelf, reminding us of their presence and the feelings they evoked when we read them. When asked directly, most of our readers believe that when they have bought an electronic text, they "have it for ever" (i3, 4), and haven´t given a thought to the possibility of formats becoming obsolete that could make their texts unreadable for future machines. But others are even not sure of what the electronic text is, some are not really sure if they own them, even though they have paid for them: "I bought it myself, so I own it, don´t I?" (i2,2). Many of the interviews contained subtle clues that owning an electronic text is not the same as owning a physical book, as exemplified here: "if it is something I want to own, then I buy the book, because then I have something material to touch, right?" (i9,4) So if they *really* want to own it, they have to buy the physical version. As with several other topics, the reader asks the interviewer for reassurance in this matter. The immaterial text is water between their fingers, as one put it, "I forget which titles I have bought unless I get the proper book" (i7, 8).

None of our readers would ever dream of throwing a physical book away, they store old books in the attic or pass them on to friends or charities. On the other hand, deleting an immaterial file doesn´t seem so problematic; one can always "get rid of a document, press 'delete'" (i4, I I) Most e-readers like to have a big collection of e-books in their tablets, but an accidental deletion is no catastrophe (a few of them didn´t even know they could recover the book from the cloud). One reader was even more extreme:

"when I am done with a text, I delete it, then I get a new one. Or I could have it in there, there is after all a lot of space. (…) I delete them when I am done with them, so it is over" (i1, 8) What is over? We wonder about this desire to establish a distance with the electronic book, which was shared by quite a few of our interviewees. Is it a form of awkwardness or simply a sense of completion? When one finishes a print book, it can be neatly put away on a shelf, but here, there is no shelf. If it stays in the machine, the finished books are clumped together with the books that are waiting to be read. We want to put a read text away, to mark it as read, "it is over".

In one sense, however, the electronic text is very enduring. If our machine malfunctions and eventually ceases to work, the texts are not lost. They reside in an invisible cloud (or whatever each particular storage system is called) from which we can download them again to our new machine, forever mirror images of themselves.

E-Text is variable

Reading in a tablet has two levels of interaction: the machine/hardware and the text. Our interviewers were at ease with their machines, and showed proficiency demonstrating various features. Most of them talked knowledgeably about the different ways of turning pages, and about how it takes some time to unlearn the habit of leafing and to convert the act of either clicking or swiping into a natural movement. Once learned, the new habit becomes natural, because it is so effortless: "it is easy to turn the pages, you just touch it slightly with your finger and it turns" (i1,1)

Once the basic tablet interaction is in place, the text has to be acquired (bought or downloaded), which in some cases involves cumbersome conversions in order to show specific formats across different hardware.

Users are not excessively bothered by this, they accept that interacting with digital devices is an endless dance of upgrading, converting and re-configuring.

Maybe because of this predisposition to variation, several of our users enjoy experimenting with the font size, the display in one or several columns, the intensity of the light and other formal properties of the text. "I can have it as I want it, I can change it, I like it" (i1,5). Some tweak this very often, searching for the best combination, convinced that there are some perfect settings out there which they just haven´t found yet. Text can also be read aloud in certain brands of tablet, and some of our readers use this function when they want to change the mode of stimuli, "it allows the brain to disconnect and I get information using other senses" (i3,2).

This ever-changing text that can be small or big, read or listened to, is fluid, is malleable. It grows and shrinks as we change fonts, but the readers screen of reference stays the same, and they report a feeling of getting lost in the text. None of our readers was able to explain what "location"[8] was in the e-texts they were reading. Is it a shifting percentage? Why does it "stay at the same number for pages and pages on end so that it indicates nothing"? (i1,6). Worse than that, most of them couldn´t find their way around in a tablet text. The lack of the physical book and the impossibility of leafing meant that they couldn´t go back and find passages of interest as every screen sort of stands alone in a spatial vacuum, crushing all that came before it and hiding everything behind it. Our readers knew of the different built-in aids to orient themselves in the text (bookmarks, index, listings) but they were not very good at using them, and most fumbled randomly with their tablets when asked to demonstrate a search for a passage: "see… you can go back to the list, or whatever… if I say "go to" (she clicks) so I

can choose a page, and then I get it (…) but of course it is hard, you don't know where to find… (…) (gives up) It would be easier with a physical book" (i2, 3).

The electronic text described by Bolter and Landow was variable in other, more fundamental ways by, for example, offering different reading paths through a story, and even different beginnings and endings. The e-texts our readers read in their tablets are not so adventurous, and the wildest formal experimentation they know is the use of multimedia in texts such as the novel *Chopsticks,* by Jessica Anthony and Rodrigo Corral (which can incidentally also be bought as a printed paperback). Old hypertext and electronic text were variable in their *essence;* modern tablet e-text is variable in its *appearance*, but the substance stays the same. It is just harder to get to and hold on to.

The tablet screen lets us into the world of the text, but it presents it in a flat way that keeps us out, preventing us from looking behind it. We cannot even superimpose screens as we do with our computer windows. Reading an e-book is like driving through a tunnel surrounded by fog. Electronic (tablet) texts carry no sense of place.

E-Text and paratexts

One fundamental difference between printed text and electronic (tablet) text is that each single book doesn´t exist in isolation, but that it is a part of a network of connections at several levels. The first one is the "library" or collection of texts downloaded by a user: "everything is synchronized with the cloud. That is, if I read in my phone and turn it off, when I come home I can pick up this (the iPad) and I can continue where I left off, because it is synchronized. Amazon knows what they are doing" (i1,4).

Most readers know that their library is stored somewhere else apart from their machines, and also that "the cloud" keeps track of what they have read so that it is possible to synchronize across multiple devices. Something else that can be updated on the fly is the annotations made by each reader: "I make marks, I underline and then there is this function to see your highlights and bookmarks" (i3,3). Readers can even see the highlights of other readers while they are reading the book, or afterwards. This can be turned on or off at will. Some of our readers reported liking it because it made them feel that they were not reading alone, knowing what others had highlighted. This way a book reaches out to the other readers of the same book, putting the e-text at the centre of a network of readings that can add a dialogic dimension to the whole experience of reading.

Tablets also have dictionaries incorporated, which help with reading when the text is foreign, like this Danish reader who enjoys English books: "I need to search a word around 3-4 times per page. Because it is a colourful language, a beautiful language, this way I learn, right?" (i1,2) The dictionary is not a heavy book that has to be fetched from the other end of the room any more: "finding the words immediately doesn´t interrupt reading in the same way" (i3,2). Dictionary and e-text are integrated in a seamless way, and this way, each text contains immediate doors to all definitions in the language it is written in.

Tablets also facilitate access to paratexts such as indexes and even summaries or sample chapters, so that readers can peruse them before deciding if they want to buy the book (i3.1). Sometimes the samples come automatically, as gifts on special occasions (such as an advent calendar made of short texts from a known publisher) or as an add-on when buying another book. This is generally seen positively, although two of the interviewees talked about

the samples as if they were "parasites" attached to whatever text one is buying, "they come in through the back door, stealing my attention" (i2,6), their only purpose to make them buy other e-books. The parasites open the door to yet other texts that become networked with the acquired one. It is a materialization of intertextuality, only the connections are not based in the texts contents, but on a taste algorithm. Control is, once more, denied the reader, "it is actually nearly always things I am not interested in" (i6,5).

E-Text anytime, anywhere... more of everything

All our interviewees reported reading more since they had started using their tablets. Most keep many e-texts in their machines, some are bought, and other are freely downloaded. Many complain of there being many print books that are impossible to get in an electronic version, but generally they are quite good at filling their machines with e-texts. Most are enthusiastic about acquiring books, and some even go in downloading sprees of the free classics even though they acknowledge that they don't have time to read them (i2,7).

There is a general feeling that "you don´t need to be so selective" with e-text, because the effort involved in acquiring it is very small (i4,9), so most readers end up having more books that they can read. Building a library is a source of joy and pride, despite Bolter's doubts: "In the age of print the library itself became the replacement for Victor Hugo´s cathedral: (…) There is nothing monumental about an electronic library" (Bolter, 1991, p. 101) It might not be monumental, but an electronic library is anyway an object of desire in a way that many bibliophiles will recognize. Most of our interviewees were enthusiastic about the possibility of having many books in the tablet, "the fact that there isn´t a physical limit to what I can have in my tablet, it is fantastic to be able to have books by the thousands" (i6,10),

but also about the fact that books could be downloaded any time. They would never ever again want something and not be able to get it: "I haven´t yet experienced the situation of being bored in Northern Norway and suddenly feeling like I have to read something, for example Jane Austen, (…). But as I said, I take it with me just in case". (i3,8). Just in case. Now they can be sure they will never lack a book to read.

This increased availability has meant that some of our interviewees have developed a voracious reading appetite, they consume texts quickly because "you don´t need to understand when you read literature (…) you can do it for the experience in itself, run it through like that" (i7,7).

E-Text for me, for you, for all

As introduced above, a direct consequence of our e-texts being networked in such an intense way is the possibility of getting involved in various forms of social reading. The most basic is to see what other readers have highlighted, which can be done "directly in the text in the case of *Amazon Kindle* or using applications like *Readmill*" (i5, 1). One interviewee puts it like this: unlike other media, books are difficult to enjoy with people, "it is hard to sit and read a book together" (i5,3), but the communities where one can see what the others have highlighted are a nice solution, a bridge to other readers, "a book with a lot of highlights is more fun to read than one with none" (i5, 1).

These loose "communities" give also readers the opportunity of discussing their favourite books with other like-minded people, which is especially important when one´s tastes aren´t mainstream; also because "you cannot lend your tablet to your friends as you would do with a good paperback you had discovered" (i7,4).

Some readers don't wish to be specially connected. An interviewee mentions the fact that a good feature of the tablet is that it allows us to hide what we are reading from those around us, for example in the train. "There are some books which we don´t want to exhibit in our shelf" (i3, 10), and private reading is a good thing. But in truth, there could be nothing less private that tablet reading. None of our interviewees commented on the fact that the publishers selling them the books and the owners of the social reading applications know exactly what books they have bought, when they have read them and at what speed, and even the notes and paratexts that have been built around them. Networking around our books is very much out of our control.

Conclusion: e-texts as simulations

We started this chapter by introducing the idea of electronic text (Bolter, 1991; Landow, 1992), which was very much about fragmentation and reconfigurations of meaning and content. We then characterized the idea of electronic (tablet) text shared by the readers we had interviewed in our empirical study and found it to be *immaterial, variable, networked* (both with paratexts and other readers), and *abundant* (we carry and read more). Both Bolter and Landow's electronic text and our tablet e-text are ruptures with the classical tradition of linear text printed in unique volumes, the first because of its content, the second because of its form.

Tablet readers keep on insisting that this new form doesn't bother them, but on second inspection, we have found evidence that the changes brought about by e-text (immateriality, variability, network) deeply upset them, "you don´t have an overview anymore, you don´t control the reading situation" (i5,12), "I can never find my way in these e-books"

(i2,5). This lack of control, combined with the doubts about ownership as presented above, suggest a feeling of disempowerment of these readers, something that is in sharp contrast with their enthusiastic appreciation of the machines and their praise of qualities such as portability, accessibility, and the abundance of texts.

All our readers were more comfortable with print books, but many explain this as a mere result of habit, as in the quote from above: "the (printed) books around us, it is just nostalgic (...) we have to leave it behind and go into the texts, the contents, that is what is important, isnt it?" (i 10, 14) This doesn´t mean that those who maintain that they become just as engrossed in an electronic text are lying, "I can disappear inside an e-book" (i2, 12). However, the status of the e-text, as understood by the readers we interviewed is not the same as that of a book, it is less real, in their own words. Six of our interviewees had what could be called Freudian slips at several places during the interviews, calling the print books "real books", as opposed to e-books. This happened even when the comparison was in favour of the e-book, such as in "the tablet is more comfortable than the real...er... the real book" (i3,8). As we quoted above, an e-text "looks like a book" (i8,10) but it isn´t.

To elucidate why this distinction might be important, we would like to turn to the idea of affordance, as it was repurposed for human–computer interaction (HCI) by Donald Norman in *The Design of Everyday Things:*[9] "the term *affordance* refers to the perceived and actual properties of the thing, primarily those fundamental properties that determine just how the thing could possibly be used. [...] Affordances provide strong clues to the operations of things. Plates are for pushing. Knobs are for turning" (Norman 1988, p. 9).

The affordances of the tablet as an object itself are clearly identified as advantageous: portable, light, smart, etc. but we can certainly also talk about the affordances of non-physical things, such as interfaces, or electronic texts. In this case, the electronic text eludes its readers... what are the affordances of an immaterial, variable, networked text? A text that is not *really* a text and cannot therefore be trusted? It keeps being conceptualized in the negative by its readers: it is unstable, because it doesn't always have the same form and it is not permanently inscribed in a book (thus merging with its platform and adopting its affordances); it occupies a vacuum. It can be read (which is an affordance of any kind of text), but it is not a book, and thus it cannot be held, displayed and loved in the same way. We argue that something that is unreal, unstable, immaterial, and variable can only ever be a supplement, a substitute that we turn to only in cases in which the real item, the book, is disadvantageous, such as travelling or commuting or when we have no more room for books in our physical shelves. Tablets are still very much "the cold machine" (i10,12), and the limitations of e-text mostly evoke nostalgia for what is lost.

It is tempting to speculate as to how this new ungraspability of e-texts will affect the way we read, remember and build knowledge. Historians of reading, such as Guglielmo Cavallo and Roger Chartier have shown how pivotal shifts in our reading habits (like the adoption of silent reading) deeply impact the way of acquiring knowledge and the general cultural climate of the West (Chartier 1997). Saint Isidoro believed that silent book reading aided memory, because the speaker could retain more information as he didn't have to concentrate on reading aloud and wasn´t distracted by the sound of his own voice (Chartier 1997, p. 142). Surely these new variable e-texts will also have an impact in how we remember and use information? Will information be quickly accessed and forgotten? Or, in a

positive vein, will the fact that each individual can carry thousands of texts with them aid the development of culture, creativity and invention?

It is important to insist that the affordances of tablets are not only about us being able to swipe, turn pages and read. The very act of sitting down to read also evokes the materiality of books, building our expectations up in ways that imbue the e-text reading experience with a poignant sense of loss. We don´t know if tablet reading will take over completely or if it will continue to coexist with book reading, so that readers still will turn to print books when trying to make sense of their e-books. We don´t know if the unreal status of e-text is a consequence of its novelty, of electronic reading being a form in its infancy, or if it is going to be a permanent feature of the e-reading experience.

In any case, electronic (tablet) text, lacking in authenticity, has become a *simulation* in Baudrillard's sense, something in place of the real thing, doing the function of the real thing. For him, this false positioning is dangerous; he writes: "to simulate is not simply to feign... feigning or dissimulation leaves the reality intact... whereas simulation threatens the difference between 'true' and 'false,' between 'real' and 'imaginary' (Baudrillard, 1983, p.5) The anxieties that we have identified in our analysis have to do with a loss of control over the text, and an unease about texts and platforms not being merged (with an unequivocal set of affordances) as in the case of print books. These anxieties are verbalized in the comparisons that oppose e-texts to "real books", where tablets, despite their wonderful features, are still the runner-ups. But what is the danger here? What could possibly happen if our community of readers reached the point where they didn´t remember what it was like to hold a printed book, to read a text materialized in a single object, to have a sense of place and authenticity?

What is lost if the e-text becomes the only standard? Will reading become a superficial consumer activity or will it develop an authenticity of its own, maybe a networked system of connections such as the one dreamt of by Vannevar Bush?

We are not sure that the answer lies in the apocalyptic or the integrated extremes, in Umberto Eco's words (1965), but somewhere in between, and maybe Walter Benjamin can help to explain this. Talking about authenticity, it is nearly inevitable to conceptualize our electronic (tablet) texts in terms of a lack of *aura*, as Benjamin defined it in his essay "The Work of Art in The Age of Mechanical Reproduction" (1936). The e-text is a reproduced copy of a copy of a copy, the original too far away to count for anything. Even the experience of reading this e-text in a tablet is a simulation, having lost the flavour of the real experience.

Relating to an object devoid of aura might provoke a sense of detachment in the reader, avoiding the ritualistic aesthetics of older times and the blind adoration of the genius author. This could be interpreted positively; if readers have less "respect" for texts and their authors, they might become more critical readers, more willing themselves to write something and make it public, to enter a democratic dialogue this way. It could also be interpreted negatively; with readers that progressively care less and only look for easy entertainment. In both cases, the possibility for change is there, at least for a while.

Notes

1. Data from *Danske Medier.* Available at: http://danskemedier.dk/nyhed/smartphones-og-tablets-stadig-mere-udbredte-blandt-danskere/ (accessed 1 December 2014)
2. We don´t see this as problematic, since our aim was to describe the

experience of reading in tablets as such, and not to tie it in to any particular sociocultural indicators. Although we are of course aware that the aesthetic

3. TNS Atlas Intermedia, 2012, TNS Gallup Group. Book reading: Daily use by sex and age 2012 (per cent). (Available at: http://nordicom.gu.se/sv/mediefakta/mediestatistik) reading experience of middle to high-middle class Danes is not universal. But our subjects are not particularly regarded as "Danes" or "men/women" but as readers engaging with a new technology.

4. In this we were inspired by the classic model by Rogers (1962), and created our own parameters in order to describe the adoption categories. It must be said that we only used the first three categories of *innovators, early adopters*, and *early majority,* since we considered that the development and spread of this technology is at its early stage and the categories of *late majority* and *laggards* cannot be said to exist yet. Even the early majority idea could be problematic if we were taking a measure of the whole population. For example, in 2012, 20% of Danes owned a tablet (which can be used for reading), and only 5% owned an e-reader that was not also a multifunction tablet (Danmarks Statistik, Available at: http://www.dst.dk/pukora/epub/upload/17443/itanv.pdf). So we look at how the majority of current users relate to their technology, not the majority of the total population.

5. This refers to works created specifically for tablets and whose length is usually shorter than an novel and longer than a short story, a sort of electronic novella, like the ones called "singles" published by Danish company Zetland.

6. Available at: http://eliterature.org/what-is-e-lit/

7. See the Electronic Literature Organization website for references: http://eliterature.org/

8. *Location* is Kindle´s "digital answer to page numbers" (from the Kindle Manual). it is a number that indicates how far one has read in a book, but

it doesn't correspond to pages in a printed book, to avoid changes when fonts are resized. It is a numerical measure of the total extension of a book based on bytes of data.
9. In his later work, Norman distinguishes between real and perceived affordances, but that disctinction is not relevant for this discussion.

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The Tablet Book 8

Ryan Burns

Tablets

Specific, Generic, Perfect?

Keywords: Perfection, technology, promise, glitch, laboratory

Introduction

This chapter uses the idea of 'perfection' to critically examine the tablet computer as a culturally-constructed object. The analytical terms used throughout the chapter, 'perfect', 'specific', 'generic', are developed from ethnographic research carried out in 2011-2012 exploring the introduction of tablets into a science laboratory. In this research the lab personnel I observed treated their tablet computers as infallible or perfect. The active voice – representing an active practice – is important here: the participants

did not simply think of their tablets as infallible, they *treated* their tablets as infallible. When the tablets failed to work as expected, the boundaries of the tablet object were tactically redrawn with the result that not-working elements were continually ejected from the perceived object. *The generic tablet, as the users constructed it, was perfect because its specific faults were removed.* Drawing on tablet users' understandings of their devices as perfect, I adopt perfection as a critical tool, firstly to understand the construction of the tablets in my study, and then to consider the intersection of specific technologies with more general cultural understandings of technology.

The chapter consists of three sections; an introductory section that outlines the specifics of the ethnographic findings; an outline of the analytical framework I develop based on those findings; and an application of the framework in a more general discussion of the role and operation of technology in society. Taking the argument full-circle, I contend that the more general analysis could be re-applied to the specific case study that constituted the ethnography.

Perfection of Tablets in the Lab

The idea that tablets are perceived as perfect was developed during ethnographic fieldwork carried out between November 2011 and August 2012. Using a combination of interviews and non-participant observations, I studied the planning and implementation stages of a project that saw a large UK University science-teaching laboratory 'go paperless' and adopt tablet computers.[1] The case study focused on chemistry and biology undergraduate teaching labs, which moved into a newly-renovated building in which all disciplines would work together in one large lab, housing around 200 students and staff at a time. The main lab is an open-plan space around 30 metres square with high ceilings. The project had been first mooted in

Summer 2010, and was given the green light in June 2011. The paperless lab opened in September 2012, and I refer to it in this chapter as 'the Lab'.

Before my analysis of tablets in the Lab, it is necessary to outline some of the site-specific reasons that tablets were adopted. Moving from existing laboratories into this newly converted building involved bringing together various disciplines which had previously been housed in individual labs, including biochemistry, chemistry and microbiology. All laboratories are subject to biocontainment precautions, designed to protect workers and the environment from potential harm arising from working with biological agents. This is controlled in the European Union by an EU directive (EEC, 1990), and by similar legal directives in other territories. It is commonly referred to as the 'biosafety level' or 'containment level' of a lab, and ranges from 1 to 4 depending on the materials being used in the lab, with 1 being the least and 4 being the most potentially hazardous. In the case study, the Lab was containment level 2, meaning that no organic material can be allowed to leave the lab space without being treated. The main practical consequence is that porous material like paper cannot easily be moved in or out of the lab. This was the primary reason that the Lab would be 'paperless', and the basis upon which the decision to use tablet computers was taken.

After various testing stages, the specific model chosen was the Samsung Galaxy Tab 10.1. The decision to choose an Android device highlighted the contradictory ways in which ideas of freedom and openness are deployed when discussing open source software (Goggin, 2012, Ippolita, 2013, Ross, 2013). The fact that the tablets ran an Android operating system was used to argue that the majority of apps would (and should) be free. This was used by the IT management as a justification for the choice of Android

tablets over other models, especially Apple iPads which were often the preference of fieldwork participants. While ostensibly empathising with free/open/libre software movements, this attitude stemmed primarily from a desire to reduce the monetary cost of the paperless system. Ironically, one attraction of the openness of the Android operating system from the IT Manager's perspective was that it could be used to apply rigorous system management to the tablets, preventing students from downloading apps or changing system settings. Thus the openness of the operating system was regarded as beneficial because it could be used to give the IT manager absolute control over students' use of the tablets.

I developed the analytical term 'perfection' in response to participants' treatment of the tablets. By 'perfect' here I mean the contradictory perception that tablet computers are infallible even when they fail. This perception was observed repeatedly during the ethnography, and was displayed most obviously during the planning and implementation stages of the Lab, in particular emerging in the process of making decisions about which tablet would be best to adopt. As part of the ethnography, I conducted 10 extended interviews with key participants in this process including the IT manager who oversaw the adoption of tablets, two key academic faculty members, four technical staff, and two members of staff who would train others to use the tablets in the Lab; an IT trainer for staff and a librarian for students. I also observed three key lab tests in which tablets were given to groups of students, around 70 in total, to use in existing laboratory sessions. During these lab tests I also informally interviewed various members of staff, faculty and students. While the faculty and staff can be considered stakeholders in the process, the students were all third-years who were soon to graduate and would not be present in the following academic year when the tablets were to be fully introduced. My key observation during

this process was that each time the tablets were found to be problematic, inadequate or even unsuitable, the participants always found an external feature to blame. Some of these instances are outlined in Table 1, and I will take the first instance from that list as an illustrative example.

One requirement for the tablets in the Lab was that they should be able to be used for notation of chemical equations, including superscript and subscript. This facility was not included as standard in the apps that were pre-installed on the device, and was also found to be a rare feature of other note-taking apps. Users' reactions to this flaw were first observed in a testing session in which the newly-purchased tablet devices were given to an existing undergraduate biochemistry class in the old laboratory before teaching had been moved into the new space of the Lab. The lab test involved giving the thirty or so students a tablet computer each and asking them to complete a normal laboratory class using the tablet and no paper. I observed the lab test itself and a meeting immediately afterwards in which the lecturer, three demonstrators and three technicians who had been involved in the lab test discussed their thoughts and feelings about the tablets. During these observations, I noted that the fact that the tablet would not easily support superscript and subscript was met with some ridicule. One technician's response to the lack of superscript was simply that it was "irritating."[2] A demonstrator quipped wryly that "the chemists won't like this!" A senior technician noted that "it's odd" that such a complex technological device could not be used for fairly basic scientific notation: "how curious!" Yet the target of this ridicule and disbelief was not the tablets themselves. The testers could not believe that the notation *apps* did not include this functionality. The discussion on this topic focused on the need to search the app store for a suitable app. One student commented to me that the tablets worked 'fine', but "we need an app just for this lab",

emphasising the tablet's potential to work well despite actually saying that the tablet was not suitable in the lab. In other words, the tablet itself was not seen to be at fault; it was the app that was 'lacking'. For every problem encountered in the planning stage, a similar shift of blame occurred: the tablet computer was treated as infallible and external factors were blamed for its shortcomings (see Table 1). The way that users made this division between the tablet itself on the one hand, and external factors on the other, is key to the analytical framework that I outline in this chapter. The perceived division between a generic material object and its specific apps is key to understanding how users conceive of their devices. The terms 'generic' and 'specific' were not used by participants, but my analysis of the problems encountered during the planning and implementation of tablets in the Lab shows that this conceptual split organised their responses, and was invoked each time a problem was encountered and the tablets did not work as expected.

Table 1 lists other instances of the tablet failing to fulfil a requirement, the explanation given, and the party blamed (either explicitly or implicitly during interviews and non-participant observations). Primarily, problems encountered using the tablets were blamed on a lack of infrastructural support either from the University or external organisations or on a lack of suitable apps. In the latter case, 'app developers' were invoked as a coherent and accountable community of people with a responsibility to provide a wide range of useful apps for various purposes. Taken as a whole, the problems encountered in the Lab can be analysed to reveal a particular understanding of the tablet object. The tablet computer, discursively constructed in discovery and resolution of problems in the planning stages of the Lab, is a generic device that is let down by specific elements (Table 1).

Table 1. Problems encountered in implementation of tablet computers

Based on findings of participant observations and interviews in the Lab 2011-2012		
Problem	Explaination	To Blame
Cannot type super- and sub-script on the devices	Lack of (free) apps that support sub- and super-script notation	App developers
The tablets sometimes struggle to connect to the Internet	Inadequate Wi-Fi infrastructure in the building	IT Support / the Institution
The tablets aren't easy to type on	Not found the right keyboard app	App developers
	Not found the right kind of stylus	Physical accessory designers
	Users need to get used to using the devices	Users
The note-taking system doesn't interact well with the University's VLE	The browser does not support the same functions on the tablet as it does on PC	Browser / app developer
Cannot live stream video and audio simultaneously	No company will underwrite tablets to broadcast and receive live AV simultaneously	Software companies
The newest version of Android does not support the preferred browser	The code was never updated	Android / the open-source community

In the following section, I develop this to show how users in the Lab engaged in tactical redrawings of the boundary of the tablet. Alongside a description of this process, I will outline my analytical framework by using the terms 'generic' and 'specific' to describe the working and not-working aspects of the tablets, and the term 'perfection' to describe the overall perception of the tablets that this redrawing achieved.

Development of analytical framework

The particular design of the tablet computer makes this new media object particularly suited to the contradictory perception of being perfect and at the same time flawed. To elaborate the complexities of this perception, I structure my argument in terms of *generic* and *specific* aspects of the device.

In the Lab, the tablets were perceived as perfect: their failures were systematically deferred to external processes or technologies so that the tablet object was perpetually regarded as faultless. I will describe the mechanism by which this contradictory perception operates, going on to offer an explanation for why this contradiction is supported. I am also concerned to understand the clear differences between users' perception of the tablet ('what the tablet is') when it was working, compared to when it failed to work as desired. In the Lab, I observed a significant split between the perception of the tablet when it was working and when it failed. I characterise this difference in terms of a split between generic and specific elements of the tablet object. My argument focuses on the moment that the tablet computer does not work as expected. This resonates with Bill Brown's assertion that "We begin to confront the thingness of objects when they stop working for us" (2001, p. 4). This relates also to Silverstone and others' discussion of the social construction of media technologies and

their growing invisibility as *technologies* through processes of acculturation (Silverstone *et al.,* 1992). This idea has more recently been taken up in an inverted way in glitch theory and the new aesthetic with the contention that glitches and errors can open up a critical space (Menkman, 2011; Sterling, 2012; Watz *et al.,* 2012). *In Error: Glitch, Noise and Jam in New Media Cultures,* Mark Nunes argues for the critical potential of errors in computational systems:

> Occasionally, though, error slips through. In these moments, error calls attention to its etymological roots: a going astray, a wandering from intended destinations. In its 'failure to communicate,' error signals a path of escape from the predictable confines of informatic control: an opening, a virtuality, a *poiesis.* [...] While often cast as a passive, yet pernicious deviation from intended results, error can also signal a potential for a strategy of misdirection, one that invokes a logic of control to create an opening for variance, play, and unintended outcomes (Nunes, 2011, p. 3).

While this approach focuses on the critical potential for errors and glitches to make visible the material and political nature of computational objects, the response to error that I describe in this chapter is different. I argue that, far from taking up the invitation to relish the error or glitch or fault, tablet computer users in the Lab responded to unexpected failures of their devices by tactically redrawing the boundaries of the object so as to *eject* the faulty element, going to some lengths to maintain the idea that the tablet computer itself is a perfect object. In this case, the glitch does not have the traction that authors such as Nunes identify, provoking a re-building, rather than a détournement. The majority of this chapter deals with the mechanism by which tablet users deal with the faults and failures

of their devices, returning to the question of the political implications of this analysis in the very final section.

When it was working as they desired, users in the Lab treated the tablet as an unproblematic and neat self-contained object consisting of the material device itself and its associated operating system, apps, files, settings and so on. The complexities of the device were unexamined as long as it did what participants hoped or expected it to do. In Borgmann's terms (Borgmann, 1987), the working tablet can be viewed as a commodity that users unproblematically consume; distinct from the material technology of the tablet device. I will continue to use Borgmann's terms and his distinctions between the 'commodity' and 'device' throughout the remainder of this chapter. Users knew that the object was part of a larger assemblage, as shown through acknowledgements that some files and systems that were being used were actually 'in the cloud'. The cloud metaphor, however, was either entirely unexamined or understood to be merely a metaphor, depending on the technical knowledge of each participant; it was never examined in any detail. As long as the tablets worked as expected, the device was treated as a 'black-box' object of which the user knows the (expected) input and output but does not understand (or does not wish to understand) the processes in between (Latour, 1986, pp. 1-4). When working as expected, the tablet was treated as a simple, understandable, self-contained object. This sense of the object was perhaps informed by the idea that the tablet used eventually in the lab by students *would* be a fixed object: the system management added by the IT Manager preventing 'unwanted' changes from being made and limiting the device to a specific range of uses.

When the tablet failed to work as expected in the Lab, such as in the examples shown in Table 1, users negotiated these problems by enacting an

interesting conceptual split. They split the device into a generic object and its specific features. This conceptual splitting occurred every time the tablet did not work. It is most easily illustrated if we return to the example of an app failing to work as expected, for instance with the notation apps in the Lab that did not include superscript and subscript functions. This was initially observed in the testing session mentioned above. Before the lab test, of the group of seven participants (one lecturer, three demonstrators, three technicians), one was very enthusiastic about using the tablets in the Lab, two were quite dubious and the other four had no strong feelings either way. The consensus afterwards was that the lab test had gone well and the tablets would be both feasible and useful in the Lab. When the inability to use superscript and subscript was raised, the participants discussed ways to address the problem. The main suggestion was that they needed simply to search for more apps, as the 'killer app' (this phrase was used) must be 'out there'. This idea was supplemented by the suggestion that a suitable app would surely be made soon, as lack of superscript would be a common problem for anybody wishing to use tablets for notations of this kind: the participants need merely wait for an enterprising developer to create the app they wanted. In this example, the specific element 'notation apps' was perceived as faulty. In blaming the specific apps, the participants tacitly framed the generic tablet as blameless – leaving the black-boxed tablet safely unopened. The splitting of the tablet into generic and specific was observed in the instances outlined in Table 1. In each case, the tablet that began as an unproblematic commodity was split into a generic object 'the tablet' which was never blamed, and a specific aspect that was found to be at fault. While working as expected, the tablet was a simple commodity that just worked. When it failed, it was split into generic and specific elements, with the generic tablet still working while the specific aspect had failed. A consequence of this repeated conceptual splitting was that the tablets

remained flawless. They were infallible – or not the problem – even when they failed; in my terms, they were perfect.

I have argued that this perfection is maintained by the splitting of the tablet into generic and specific aspects. This language is intended to reflect the material characteristics of the tablet object. The physical object that I take out of the box when I buy a tablet computer is not designed to do anything in particular: it is generic. Of course, there are some apps that are native to the operating system of any device, so that the tablet in effect comes 'pre-loaded' with a range of apps. This determines the initial functionality of the device to some extent. The majority of tablets, including the Android devices used in the Lab, come with an 'app store' pre-loaded, so that the user can download more apps. The tablet's particular functionality comes from its apps, each of which is designed to do something specific. The tablet is represented as a generic object which is not designed for a specific function, but for many. This is illustrated most emphatically in the case of the Apple App Store which boasts "There are over 475,000 apps that turn your iPad into anything you want it to be".[3] Whether this means that tablets are understood to do many things or do nothing at all depends on how and where the boundaries of the object are drawn. Are the apps part of the object, or are they external features? My research suggests that these boundaries are perceived to be flexible and are conceived of differently in different situations in order to support an overall perception of tablets as perfect. If an app, designed to perform a specific task, does not perform that task adequately, then it is at fault. Conversely, the tablet, not designed to do anything in particular, logically can never do anything wrong. When working, the tablet object is clearly faultless. When failing to work as expected in a given task, it is still faultless thanks to the split between generic and specific which perpetually shields the tablet from blame, maintaining its perfection.

Considering the tablet in the Lab in terms of early ANT, it is quite easy to undo the naïve ontology that users applied to the device and argue that both the generic object and its specific elements are part of the same assemblage. ANT enables the researcher to 'see the device', not as a discrete object that works or does not work, but as the immediate material instantiation of an assemblage of actants. These combine to give the user an unproblematic experience where their tablet 'just works'; for ANT this is the black box, for Borgmann the commodity. However, while ANT is a useful way to understand the tablet object as an object 'containing' a multitude, it does not reflect users' perceptions of tablets in the Lab. Users did not seek to engage with the device in all its material reality; they actively consumed it as a commodity, aggressively cutting through its complexity to construct a simple object. Tactically redrawing the boundaries of the object, they were able to maintain its perfection, its cohesion as an object, and to evade the contradictions that they would otherwise have to confront.

These initial observations were drawn from a specific case study, but I argue that the splitting of the tablet objects into their generic and specific aspects relates to a broader sweep of technological practices and can be developed into a critical framework that can be used to think through aspects of technologies and their instantiation into everyday cultures more generally. I do not argue that this split occurs in the same way in every use of every technology. I do argue, however, that this split is common and can be observed not only in specific contexts such as the Lab, but also in other more general contexts – and is also evident in advertising and marketing, which I address briefly in the following section. Anecdotally, it is found in common examples from everyday life, such as when a tablet computer fails to retrieve a user's emails due to poor Internet connection and the user blames 'the Internet' in some abstract way, leaving the actual tablet

blameless. It can be argued indeed that this split is not simply common but general in an overarching cultural sense. The remainder of this chapter will outline my claim that this split manifests a logic that underlies shared cultural understandings of individual technologies and is inherently political.

Using 'perfection' to connect technology's specific and generic forms

In the final section, I address the reasons why the tablet is regarded as perfect, arguing firstly that the material properties of tablets are particularly suited to supporting this conception and secondly that this idea maps onto a cultural fetishization of technology that is invoked via a similar split between generic (perfect) technology and specific (fallible) technologies.

In the Lab, I observed that the working tablet is a black-box in which the assemblage that allows it to work is invisible, while the not-working tablet makes this assemblage visible and splits it. As soon as any element of the tablet assemblage fails, it ceases to belong to the (working) tablet and is therefore necessarily ejected from the object. This is the split that users deploy to maintain the idea of a generic (perfect) tablet computer and a specific (fallible) element. The split that users perform when the tablet fails indicates a nuanced understanding of the object and its boundaries. When working, users give little or no thought to the assemblage that comprises the object. The object is understood to 'contain' (in an unexamined sense) all of the features and elements that make it a working object. Users have no need to consider the existence of distant data centres that house the material substantiation of their files and settings, nor the material and immaterial communications infrastructures that allow data to be transferred between the tablet computer and other objects. The boundaries of the object are taken to be those of the simple physical self-contained object in which all of the functions of the tablet take place.

In giving a detailed explanation of the mechanism by which users actively and reactively construct the tablet object in order to maintain its perfection, I have not touched on the question of motivation. Why do users perform this nuanced conceptual switch, why make tablets perfect? As each user's experience is clearly different, any attempt at a definitive answer to this question will evidently generalise and be incomplete. In the Lab, there was evidence that the institutional politics in that particular case meant that the tablets were discursively constructed in a fetishized and celebrated position that meant their perfection was guaranteed. In the ethnography, this type of institutional politics was most evident in what I observed as a general determination to make the tablets work in the Lab. This seemed to stem from a general acceptance by the faculty, staff and students that they would inevitably be using the tablets next year, so had better make the best of them. This was striking bearing in mind that my observations took place during the trial and planning period of the project, ostensibly aiming to test the feasibility of the tablets. The most relevant reason for tablets being maintained as perfect in the particular case of the Lab was hinted at by two interviewees: one technician based in the lab, and one librarian who would be giving students general training in using tablets. When asked why the tablets were being used the following academic year, the technician gave a sardonic response: "because the Vice Chancellor had a great vision of an amazing new Lab full of happy students all paying thirty thousand pounds a year." The librarian made an equally candid comment saying that he had noticed recent "tablet mania" in the university as a whole, saying that "all the bosses have been given tablets and told to use them in meetings." The University's substantial and somewhat risky investment in this flashy technology could easily be met with internal hierarchical or public disapproval, and perhaps the participants needed to treat the tablets as perfect to prevent the humiliation of a failed 'innovative project'.

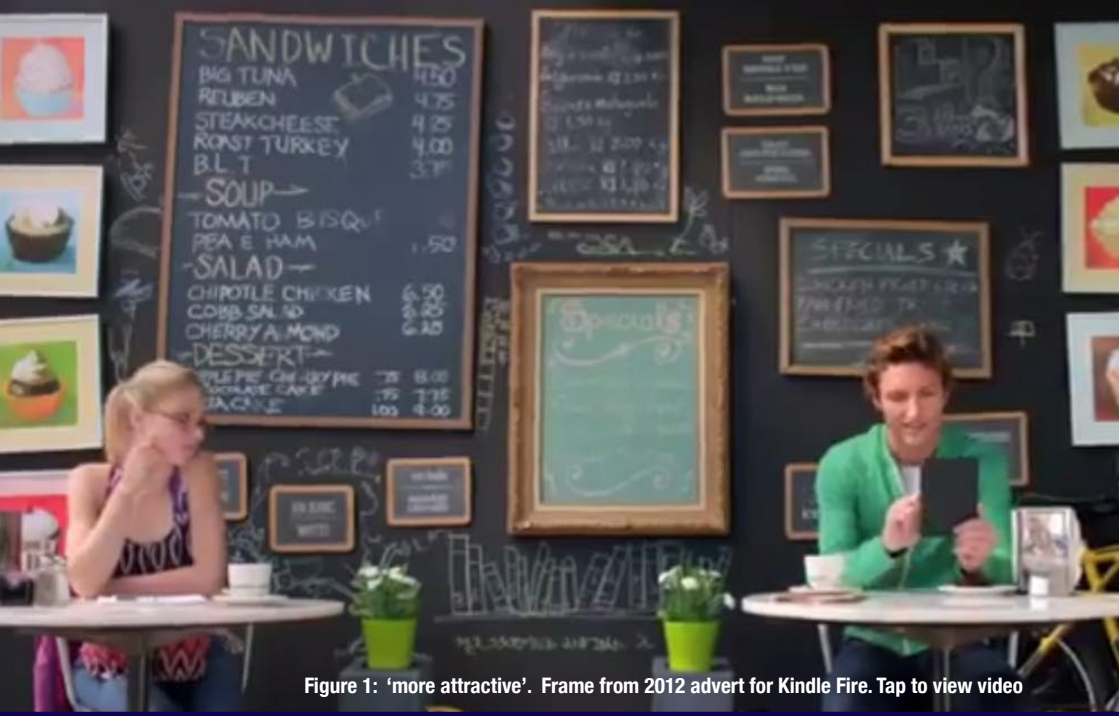

Figure 1: 'more attractive'. Frame from 2012 advert for Kindle Fire. Tap to view video

Anybody who has bought a tablet computer may be similarly invested in protecting the reputation of the device, preferring to blame inadequate apps or dodgy wireless signal when the tablet fails to work rather than admitting that their extravagant purchase is flawed. Issues of different types of institutional, personal and emotional investment may well be influential in many cases.

Marketing campaigns present their commodity as something of a perfect device that makes us more attractive [Figure 1], better at our jobs [Figure 2], more connected to loved ones [Figure 3] – or present tablets (sometimes ironically) as Godly devices [Figure 4]. It would be foolish to ignore the cultural significance of these discourses on the perception of an object such as the tablet computer, each undoubtedly contributing to the constitution of tablets as rather extraordinary technological objects. Yet I believe that a more productive critique can be brought to bear on these objects if we go beyond the idea of tablets as 'wonderful' commodities and

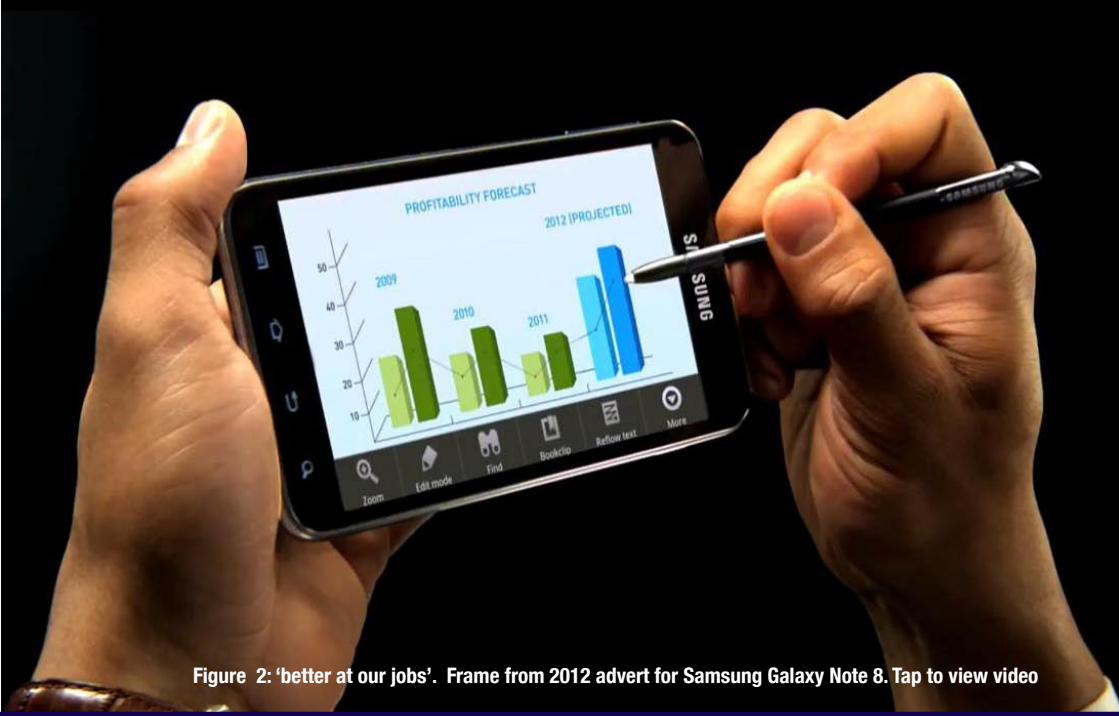

Figure 2: 'better at our jobs'. Frame from 2012 advert for Samsung Galaxy Note 8. Tap to view video

instead think of them as 'perfect' objects. Not because they *are* infallible, nor because they do the things that advertisers would claim. I use the term 'perfection' to capture the idea that tablets perfectly embody a cultural understanding of technology which is based around the split between generic (perfect) and specific (fallible).

This generic (perfect) and specific (fallible) split precedes the perception of any given cultural object. I argue that this split is inherent in a technological rationality that guides our understanding not only of technological objects but of technology's role in society in general. The notion of a split between generic and specific has been elaborated elsewhere, although not in these terms. In Ellul (1964) the specific machines and in particular the specific methods that we adopt in society add up to a general technique. Postman (1993) proposes three taxonomies, in each of which the use of specific technologies are treated as manifestations of the general technological order: tool-bearing, technocracy and technopoly. Marcuse (1982)

Figure 3: More connected to our loved ones. Tap to view video.

distinguishes between "technics proper (that is, the technical apparatus of industry, transportation, communication)", in my terms ' specifics', and "Technology, as a mode of production, as the totality of instruments, devices and contrivances which characterize the machine age [which] is thus at the same time a mode of organizing and perpetuating (or changing) social relationships, a manifestation of prevalent thought and behavior patterns, an instrument for control and domination" (Marcuse, 1982, p. 138), or in my terms technology in general. Borgmann (1987) argues that "Technology becomes most concrete and evident in (technological) devices, in objects such as television sets, central heating plants, automobiles, and the like. Devices therefore represent clear and accessible cases of the pattern or paradigm of modern technology" (1987, p. 3). Although each of these authors makes their own particular arguments about technology, they share a theoretical conceptualisation that incorporates a split between generic technology as a more or less overarching social structure and specific technologies as instances of that structure.

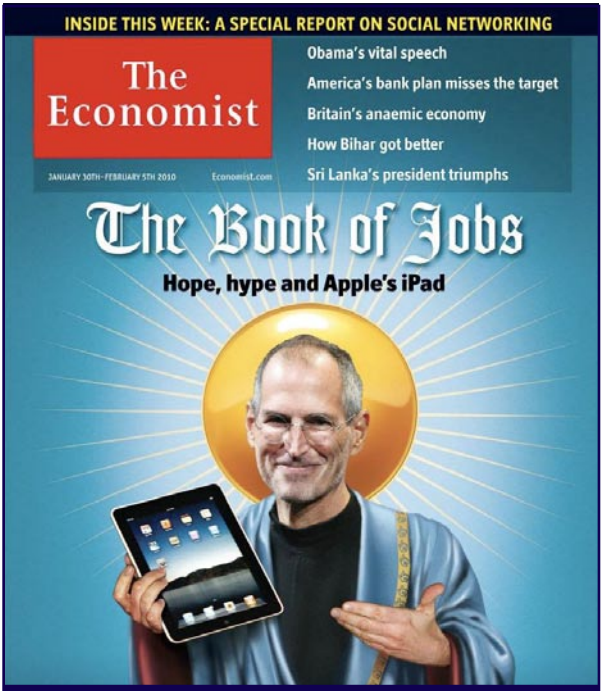

Figure 4: 'Godly'. Front cover of the Economist 30th January 2012. Tap to view source.

On a scale more comparable to the current examination of tablet computers, Bell and Dourish (2007) give this split a teleological inflection in their idea of a 'proximate future' which can be read as an idea of a reachable perfection in computing design (general) that is aimed towards in the material design of current technologies (specific). Dourish and Bell (2011: chapter two) argue that Mark Weiser's (1991) article *"The Computer for the 21st Century"* set a rhetorical tone of progress in ubiquitous computing "toward a proximate (and inevitable) technological future" (2011, p. 23).[4] The idea of a 'proximate future' incorporates a split between generic and specific that operates in terms of a well-defined conception of perfection: where specific technologies are fallible and generic technology (in a proximate future that may or may not be achievable) is perfect.

According to this framework, perfection is a measure of the gap between specific technologies and their final, perfect instantiation, which would form

and be formed by a perfect general technological landscape. As such, each iteration of a technology becomes a 'better' specific as it reaches closer to the teleological endpoint of perfection. The strength of the concept of the 'proximate future' is that it captures the ever-receding nature of perfection as something always on the horizon, constantly being reached towards but never achieved. The latest iteration of a technology is only a 'better' specific in relation to previous models, but not in terms of its distance from the endpoint of general perfection. Old models get further away from perfection, but new models never get nearer. This can be observed in the consumerist cycle of new models of mobile devices. The *iPad Air*, released in November 2013, is the best specific instance of the *iPad.* But so was the *iPad with Retina Display,* released in November 2012. As was *the new iPad,* released in March 2012. Each new iteration is better than the previous model. But the newest specific technology is held at a consistent distance from the generic perfect technology that it is framed as aiming towards. *This explains how a once-perfect object can become fallible.* The marketing discourses used to sell tablet computers frame 'working' within a sense of perfection that means 'working at maximum possible speed, at the minimum possible physical size, for the current technology'. So according to the marketing, the old model is not just inferior – it has stopped working. And what happens to elements that aren't working? They are ejected from the previously black--boxed generic object, they become specific, and therefore fallible.

We can see here that the way that 'flaws' are invoked in each case is directly involved in the framing of perfection. The marketing discourse invokes a sense of perfection as the fastest, smallest possible object. But this is only one way to frame perfection. The mechanism that I have described above, where flaws are accounted for and dealt with by splitting the object into

specific and generic elements, allows users to reject the idea of perfection represented by marketing or any other discourse. A user who feels that their 1st-generation iPad works fine and does not need to be upgraded is engaging with an alternative idea of perfection than that posited by the marketing of ever-faster, ever-smaller devices. By engaging with different versions of perfection, users can assert non-hegemonic values, in a way that resonates with Nunes' assertion that the glitch moment can create an opening for variance and play (Nunes, 2011). As argued above, the reason that the moment of failure of tablets in the Lab did not open up such alternative ways of understanding can be explained by the institutional politics specific to that case study, where users were subject to pressure to maintain the hegemonic perfection; the idea that their tablets were infallible.

To return to the case in point, I will restate the claim that tablet computers are perfect. But not in the sense that marketing aims to convey, nor in the sense observed in the Lab; that they are infallible. Rather, tablets perfectly embody this split between specific and generic. As well as being positioned as a specific (fallible) technology that fits into a generic (perfect) overarching technological system, tablets themselves are split. As I have discussed above, tablet users engage in tactical redrawing of the boundaries of the object in order to maintain the device as a generic and perfect commodity. Faults encountered are blamed on elements of the previously black-boxed assemblage. These elements, in the process of being blamed, are ejected from the generic object and positioned as specifics and thus fallible. The tablet computer, conceptually split by users to maintain its infallibility – its perfection – is thus a perfect manifestation of the generic/specific split that also exists at a more generalised level, framing specific technologies as fallible, and general technology as perfect.

It is important to note that 'perfect' as I employ it to describe this generalised split does not (necessarily) mean 'good'. Rather, perfection refers to a totalising and complete instantiation of a technological rationality. And I emphasise the phrase 'a technological rationality' in the previous sentence, to indicate that this technological rationality can take many different forms. What 'perfection' looks like is an ethical question and a question of politics. Specific technologies are framed in ways that tend towards a generic and perfect solution. But it is always a politically-determined perfection, and one that is changed by the way that specific technologies are used, constructed, framed and thought about in everyday life. The general technology that is a perfect overarching logic is necessarily bound to specific technologies and the ways in which we understand them to be fallible. The relationship between the specific and generic was manifested in the Lab in the tactical decisions that users made in redrawing the boundaries of the object to maintain its generic perfection.

Users' decisions in framing their technological objects as perfect, and the definition of perfection that they invoke, therefore have important social implications. The ways that tablet users in the Lab made nuanced and tactical choices to maintain their devices as perfect not only constructs a particular idea of the device; these choices build a world, they construct a particular technological rationality that frames the role of all specific technologies. Ideas of perfection are being played out and fought over repeatedly in these everyday tactical decisions. In the first instance, to describe tablet computers as perfect might seem to play directly into a consumer culture that fetishizes such technological objects. But this is not necessarily the case. In treating tablets as perfect in this way, we recast users as active subjects in a technological world in which perfection is a motivating rationality, but one that is constantly created in the present.

Rather than tablets manifesting a generic predetermined technological rationality, tablets and other specific technological objects become a site of the design and creation of a continuously contested idea of perfection.

Notes

1. For the sake of anonymity of the participants, the University has not been named. All names of people and buildings have been changed. Job roles have also been changed to an equivalent that describes the role and level of seniority where appropriate.
2. Quotations in this section are taken from research fieldnotes.
3. http://www.apple.com/uk/ipad-air/app-store/ (accessed 8th December 2013).
4. It might be noted that Weiser's article appeared in several of the papers presented at the Tablet Symposium, which was the origin of this e-book. This promise of perfection pervades academic treatments of tablet computers as much as cultural understandings.

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