

**Situated Dissemination: Critiquing the materiality and visibility of HCI
knowledges through a local dissemination practice**

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For My Grandma

Abstract

This practice-led thesis investigates how research dissemination is currently understood as a practice in HCI. The focus on understanding research dissemination as a practice is motivated by recent debates within HCI communities about the disciplinary basis of HCI, by increasing competition amongst HCI conferences to expand their audiences, and by the emergence of new dissemination forms to accommodate growing interdisciplinary work in HCI. Organisations such as the ACM SIGCHI (Special Interest Group on Computer-Human Interaction) regularly promote new dissemination forms, however these top-down calls for submissions have not yet generated critical discussions about the materiality of HCI knowledges, and the impact of new dissemination media on that materiality. This is the focus of this thesis, which investigates the way macro dissemination cultures in HCI impact on micro dissemination practice in an HCI workplace and identifies how the future practice of dissemination in HCI may be implicated.

The investigation is carried out through three workplace-based case studies, which draw on ethnographic principles, and are informed by selected feminist critiques of science, theories of representation and by performance arts practice. These case studies form an overarching process of critiquing research dissemination in situ, as well as illustrating the developing methodological approach, which moves from participant observation to performance and practice based engagements. All three case studies are located in Open Lab, Newcastle University, where I worked and where I was based as a PhD student between 2013 to 2016.

Chapters 4-6 document and critique how research dissemination is organised as routine work in an HCI workplace, and discuss how reflexive accounts of research may be suppressed or diminished by routinised dissemination practice. I describe the production of CHI videos as a genre of research videos in HCI. I present the results of focus groups and surveys on CHI video, in which I draw from my freelance videography experience and new membership of the HCI workplace to unpick the visuality of CHI videos as a new medium of dissemination in HCI. Secondly, I discuss my participation in the organisation and production of another dissemination artefact, the CHI booklets. I illustrate how the production of the booklets is routinised and carried out by different members of the research group. I draw connections between local dissemination practice to a wider network of the ACM SIGCHI

community. I discuss how the materiality of HCI knowledges is addressed through the production of dissemination artefacts. Lastly, in chapter 6, I present the process of making research fictions (RF). I develop such making as a concept to engage HCI practitioners in performatively critiquing local dissemination practice. Based on my arts practice I interrogate the materiality of dissemination and utilise the theory of reenactment from performance arts to produce a series of alternative dissemination artefacts in the workplace.

In conclusion, I identify the shortage of critical dialogues and methodological resources within HCI for fully understanding and engaging with dissemination practice. Drawing on the case studies, I offer a theory of 'Situated Dissemination' (SD) which contributes to the literature in HCI on embodied thinking/interaction/design, as well as extending HCI methodologies on workplace studies. The theory of SD is offered as a framework for critiquing dissemination practice in HCI and as providing innovative alternatives to routinised dissemination practice as situated and embodied practice in HCI workplaces.

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Table of Contents

Abstract	iii
Acknowledgements.....	v
Table of Contents	vi
List of figures	xi
Publications.....	xii
Chapter 1. Introduction	1
1.1 Research Dissemination	1
1.1.1 Dissemination Audiences.....	1
1.1.2 Knowledge and Power	3
1.1.3 Visuality and Materiality of Knowledge.....	4
1.1.4 Why HCI?.....	5
1.2 Ethnographic Approach.....	6
1.2.1 Critical Art Practice.....	8
1.3 Contribution to HCI	9
1.4 Motivation.....	9
1.5 Research Questions.....	10
1.6 Summary.....	11
Chapter 2. Literature Review	14
2.1 The Focus of the Review	14
2.2 Part One: Scientific discourses	15
2.2.1 Organised Computing as Science.....	15
2.2.2 The Technology Industry.....	17
2.2.3 Critical Technical Practice	18
2.2.4 Scientific writing.....	19
2.2.5 Problematizing Dissemination	22

2.2.6	The Academic Paper	23
2.3	Part Two: Feminist critiques of scientific knowledge	25
2.3.1	Situated Knowledges	25
2.3.2	Reflexivity	29
2.3.3	Desktop Reflexivity	31
2.3.4	Visuality and materiality	32
2.3.5	New Formats in HCI	33
2.3.6	Emergent Interdisciplinary Practice	35
2.4	Summary	37
Chapter 3: Practice-Led Research.....		38
3.1	Introduction	38
3.2	Encountering Interdisciplinarity	40
3.2.1	Becoming a Practitioner	40
3.2.2	Creative Research	41
3.2.3	Human-Computer Interaction	44
3.3	Ethnography and Reflexivity	46
3.3.1	Participant-observation	47
3.3.2	Ethnomethodology and workplace studies.....	49
3.3.3	Ethnographic Fictions	51
3.3.4	The Artist as Ethnographer.....	53
3.3.5	New Approaches to Ethnography in HCI	55
3.4	Structuring the Case Studies.....	57
3.4.1	Three Case Studies in the HCI Workplace	58
Chapter 4: CHI video.....		60
4.1	Introduction	60
4.2	Video in HCI.....	62
4.2.1	History of Video-Making in HCI	62

4.2.2	Video Analysis	62
4.2.3	Research Dissemination as Video	63
4.3	Before ethnography	65
4.3.1	BinCam	66
4.4	Making Visual Provocations	68
4.4.1	Annotated Portfolios.....	69
4.4.2	St. Jerome in His Study.....	71
4.4.3	Artistic Engagements	71
4.4.4	Paper Prototypes	72
4.4.5	Lenticulars	74
4.5	Focus groups.....	75
4.5.1	Video ‘madness’	77
4.5.2	Status Quo.....	79
4.5.3	Alternative Formats	80
4.6	Postcard Survey.....	83
4.7	Summary.....	86
Chapter 5: CHI booklet.....		88
5.1	Introduction.....	88
5.2	Workplace Study	90
5.3	Role of the Booklet.....	91
5.4	Participating in the Booklet’s Production	92
5.4.1	Production Meeting	94
5.4.2	Editorial Process.....	95
5.4.3	Materiality of the Booklet.....	97
5.5	Producing Consistency	98
5.5.1	Performing Excellence	101
5.5.2	Visual Documentation.....	104

5.5.3	The Booklet as Artefact	107
5.6	Reflection on ethnomethodology.....	108
5.6.1	Blind Spot.....	109
5.7	Summary	110
Chapter 6: Research Fictions		112
6.1	Introduction	112
6.2	What are Research Fictions?	112
6.2.1	Productive Critiques	113
6.2.2	Response to Methodological Challenges	114
6.2.3	Feminist HCI and Feminist Practice	116
6.3	Embodied Reenactment	117
6.3.1	Reenactment in Performance	118
6.3.2	Reenactment in Documentary	121
6.4	Making Research Fictions	124
6.5	Research Fiction 1: Get Ready With Me – In the Bathroom (GRWM).....	126
6.5.1	Background	126
6.5.2	Making Process.....	129
6.5.3	Installation	131
6.6	Research Fiction 2: Inflatable.....	133
6.6.1	Background	133
6.6.2	Making Process.....	136
6.6.3	Performance	140
6.7	Summary	142
6.7.1	Encountering Situatedness.....	143
6.7.2	RF as Critique of Dominant Dissemination Practices	144
Chapter 7: Towards a Situated Dissemination Practice		146
7.1	Introduction	146

7.2	Producing Critiques of Routinised Dissemination.....	147
7.2.1	RQ1: Significance.....	148
7.2.2	RQ2: Methods.....	150
7.3	Encountering Reflexivity at the Workplace.....	152
7.3.1	RQ3: Implications.....	153
7.3.2	Utility of Art Practice to SD.....	155
7.3.3	Implications for Feminist HCI.....	157
7.4	Situated Dissemination Practice.....	158
7.5	Contributions.....	161
7.5.1	Dissemination Practice in HCI.....	161
7.5.2	Feminist Critiques of Science.....	162
7.5.3	Academic Workplace Studies.....	162
7.6	Future Work.....	163
7.7	Reflexive Account of the Thesis.....	165
7.7.1	Beginnings.....	166
7.7.2	Bureaucracy.....	167
7.7.3	Repercussions.....	168
7.7.4	Embracing Irregularities.....	168
	Bibliography.....	170
	Appendix A.....	177
	Appendix B.....	179
	Appendix B – 1.....	180
	Appendix C.....	181
	Appendix D.....	182
	Appendix E.....	183

List of figures

Figure 1. The open plan office inside Culture Lab, Newcastle University where the HCI research group was based. Photo: Ko-Le Chen.....	66
Figure 2. St Jerome in His Study by Pieter Coecke van Aelst, the elder (Flemish, 1502-1550)	70
Figure 3. Screenshots of the provocation video. Photo: Ko-Le Chen.....	73
Figure 4. Selected physical visual prompts created for the focus group, from left to right: the original lenticular image(s), acetate copy, gel-flex copy, and laser-engraving copy. Photo: Ko-Le Chen	74
Figure 5. Room arrangement for the focus group. Photo: Ko-Le Chen.....	76
Figure 6. Postcard front and back (from PDF file). Design: Ko-Le Chen	83
Figure 7. Print copy of the CHI booklet. Photo: Ko-Le Chen	89
Figure 8 & 9. Stills of the same composition by Cindy Sherman (1981) and a Japanese male artist Yasumara Morimura (1998).	120
Figure 10. A still frame from 'Lovely Andrea' (2008).	123
Figure 11. A still from the GRWM video. Photo: Ko-Le Chen.....	126
Figure 12. Image from the photoshoot in my apartment's bathroom. The same image appears as in Teresa's publications, featuring the prototype 'Labella'. Photo: Ko-Le Chen .	129
Figure 13. A still image from the video recording of the live performance of Inflatable. Photo: Ko-Le Chen.....	133
Figure 14. Photograph taken by me during a production meeting. Photo: Ko-Le Chen.....	135
Figure 15. Pinterest mood board that Matt <i>and I</i> populated with sketch ideas for 'inflatable'.	136
Figure 16. Photo of the blow-up dolls, with Matt and I next to them. Photo: Clara Crivellaro	138
Figure 17. The performance venue of Inflatable at NewBridge gallery. Photo: Ko-Le Chen .	140
Figure 18. Event flyer for 'Inflatable' designed by myself, using visual elements from Matt's workshop documentations.....	142

Publications

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Chapter 1. Introduction

1.1 Research Dissemination

Research dissemination is a ubiquitous term in academia but also one that is rather unexamined. This thesis aims to give an account of how dissemination is understood in the field of Human-Computer Interaction (HCI), through an approach that considers dissemination as a practice, through which knowledge exchanges are carried out. These exchanges, in the form of academic publishing, conferences, and related events in the field, are held within the rubric of established dissemination practices that HCI as a discipline is both subjected to and propagates. The way in which these practices are established, maintained and extended is of particular interest, and the thesis focuses on both what I term the macro-scale dissemination cultures through which HCI operates – large organisations such as the Associations of Computing Machinery Special Interest Group on Computer-Human Interaction (ACM SIGCHI)¹ which control and enforce dissemination guidance and venues – and the micro or local-scale dissemination practices that occur on a daily basis within HCI workplaces. The relationship between these scales, and the knowledges that are exchanged and implicit within them, is complex and interlinked. Dissemination practices that are incorporated into the everyday running of a workplace give insight into wider, more culturally entrenched practices in the discipline. Likewise, established frameworks for dissemination practices create cycles of production and publication in workplaces, reinforcing and maintaining disciplinary standards.

1.1.1 Dissemination Audiences

Dissemination can be broadly defined as the processes through which knowledge is communicated. In particular, it refers to scholarly communication and the distribution of knowledge within academia. However, in the context of policy concern to ensure that universities contribute to a knowledge economy and knowledge society, dissemination increasingly refers to a growing diversity of modes in which scholarly research can be communicated to a wider audience, including policy makers, industry and the wider public (Luff *et al.*, 2000; Serrat, 2017). Thus, although academic research is often understood by the wider public to be preoccupied with dissemination to other academics, however increasingly

¹ Official website of the ACM SIGCHI - <https://sigchi.org/>

dissemination targets specific audiences, and many publicly-funded projects will include an obligation to engage a particular public audience or demographic. The array of activities that dissemination encompasses demonstrates frequent associations with and concerns over *impact*. Impact, broadly understood as the effect research has on a wider, non-academic public, is part of the lexicon of academic research management (Donovan, 2011; Martin, 2011). This is especially the case for publicly-funded academic research in universities, where it is often a requirement of obtaining research funding that the applicant can show how their research will benefit the economy and society, and there is a need, in the application, to show how the knowledge generated from a publicly-funded research project will be distributed 'back' to the public that helps to fund it (see, for example, the guidance on impact on the Economic and Social Research Council website²). Because of the heightened importance of impact and dissemination strategies for university funding, in an increasingly competitive environment, the activity of disseminating research-based knowledge is often considered by university management to be an activity that should be supervised, and, to a degree, standardised, as part of the growing research management culture—indeed, as part of increasing managerialism in the sector (Reed, 2002). The practice is systematic, targeted to ensure that knowledge is put into circulation to both academic and non-academic audiences, and utilising dissemination strategies that ensure research projects can continue to be funded, or else lead to further research projects. Dissemination, in short, is the principal means by which academic knowledge self-perpetuates and self-sustains.

When dissemination first became a priority for higher education, the model of dissemination that dominated was sequential. That model has continued to have a strong impact on the design of research work. Research uncovers new knowledge, and dissemination is a second stage activity, through which research results are summarised or simplified, and then communicated to specific audiences, through materials tailored to their needs. Research dissemination, then, largely depends on the idea that knowledge is to be distributed widely after the actual research is concluded. This idea of a separate phase is an important part of academic research in the current funding culture and is integral to mechanisms of funding, publication and resourcing. It creates a retrospective approach to understanding and measuring the value of dissemination practices (Wilson *et al.*, 2010). It places dissemination

² Impact toolkit of the Economic and Social Research Council - <http://www.esrc.ac.uk/research/impact-toolkit/>

as a stage that may determine the success of research towards or at the conclusion of the work, rather than as an ongoing aspect of it. This thesis seeks to discuss, exemplify and reframe dissemination practices as ongoing and reciprocal, as potentially occurring throughout the research, indeed as integral to it, rather than finite and fixed, in an attempt to capture and understand dissemination as a practice that is reactive and that has an influence on the work of doing research.

1.1.2 Knowledge and Power

Any discussion of knowledge is obliged to confront the relationship of knowledge to power. An exploration of dissemination is no exception, as we are immediately confronted with fundamental questions concerning which knowledge is valued and disseminated, to whom and for what purposes? The production and dissemination of knowledge has been entangled in the history of power in the Western world and beyond for centuries, and universities have played a significant role in that production and dissemination across the globe since their inception. The growth of global communications, and the positioning of universities in a global arena, has perhaps made the power-knowledge relationship even more significant, as a knowledge economy becomes critical to economic growth (Marginson *et al.*, 2010).

A comprehensive discussion of the issues raised by consideration of the knowledge-power relationship is beyond the scope of this thesis, however I introduce the topic here because it is present in the literature and the thinking that shapes the thesis. I see knowledge practices as connected to and in relationship with power structures in societies, through the concepts of discourse and ideology, understood as the means through which power is (re)instated. For example, the discourse of dissemination draws strongly on a neo-liberal ideology of competition as the driver of excellence, and of accountability to a wider public of funded institutions and activities, as indicated above (Martin, 2011). These discursive resources in turn validate the drive towards tighter management control of academic work, including research, and thus seek to mobilise the power implicit in assessment frameworks and impact policies to protect or develop institutional agendas. Disciplines seeking to establish or maintain their positions in university hierarchies must respond to, harness or challenge the power implicit in these assessment frameworks - a challenge that may be especially difficult for newer fields of work. In developing this kind of analysis, I attempt to work with key principles of cultural sociology, understanding that terms such as discourse and knowledge

are constructions that draw on shared and circulating patterns of meaning that actively both penetrate and reflect the social world (Back and Bennett, 2012). These narratives, rituals and representations, including those associated with knowledge, its hierarchies and its practices, shape institutions, objects and practices, including those of dissemination of research.

1.1.3 *Visuality and Materiality of Knowledge*

Despite the significance of dissemination as stated by funding bodies such as the HEFCE, for example in the policy on open access to research³ and the impact of exercises such as the Research Excellence Framework⁴, the term dissemination itself lacks clear definition and brings to mind a range of possible artefacts through which dissemination may be manifested in. The means by which knowledge is written up and transformed into articles, videos, presentations and other forms of 'submission' are rather unexamined. With reference to the ideas in the previous paragraph, the constructions that make up patterns of meaning around 'dissemination' are not often a subject of study. The term is understood in common sense ways, even by those engaged in it. Yet dissemination is in fact an ambiguous concept, in that it is not the subject of academic enquiry, both the theory and practice of dissemination are under-examined, and yet it is an activity with significant status in the academic context.

The literature on materiality, that focusses on the agency of objects (Tolia-Kelly and Rose, 2012) draws attention to the absence of discussion of the materials and practices that dissemination consists of. Yet dissemination of academic knowledge has a history in which these materials and their associated practices change and develop over time. Indeed, they continue to change. The arrival of print media reinforced the idea of publication-based dissemination and the publication standard is an integral part of academic research. With recent moves to online, digital modes of communication, the format of publication has expanded. Many new and open-access online journals are being founded, and the peer-review system as a foundation stone of academic research is coming under renewed scrutiny (Lee *et al.*, 2013).

As part of this opening out of publication forms, academic research is more frequently being disseminated through what are generally regarded as 'alternative modes' such as video or

³ <http://www.hefce.ac.uk/rsrch/oa/>

⁴ <http://www.hefce.ac.uk/rsrch/ref2021/>

other digital media (Bazeley, 2010). Design-led research has regained attention in academic publication and assessment cycles, and the ongoing interest in interdisciplinary work has admitted alternative dissemination practices into established disciplines. It has also generated debate and presented challenges to ‘young’ disciplines such as HCI with a smaller body of disciplinary knowledge that is attached to them. It is against that backdrop, and through the lens of materiality, that the focus of this thesis on HCI, and dissemination within the field, emerged.

1.1.4 Why HCI?

Because HCI has been highly experimental in terms of the dissemination formats that it adopts, due to the history of HCI research (Long and Dowell, 1989; Rogers, 2012) being often associated with engineering and interaction design, enquiry aimed at understanding dissemination practice has been something of an undercurrent in the field of HCI, although that research has focused on ways of doing dissemination, rather than on understanding emergent practices of dissemination. This research, associated as it is with contemporary and forward-looking technologies, often involves a large amount of prototyping, speculative design, and technologically-driven future imaginaries (Harper *et al.*, 2008). HCI researchers are adept in communicating research through live demonstration and video, and close relationships with the technology industry generate significant public impact through sophisticated approaches to the keynote tradition (for example Steve Jobs’ trademark turtle necks and “One More Things” during Apple product launches). The academic discipline of HCI emerged as something of a hotbed for debating dissemination practice, which produced an equivalent share of dissemination problematics. HCI, and many other more recent disciplines, traditionally adopted the established practices of academic research and dissemination, in order to acquire validity and status for the field as a relative newcomer. New and experimental approaches were thought to increase the risk that HCI would not be accorded the status and influence attached to older areas of research (Liu *et al.*, 2014; Reeves, 2015a; Reeves, 2015b). It is important for the wider field of Computing Science, to which HCI in many universities are taught under the rubric of, that HCI is regarded as a serious area of academic endeavour and expertise, able to define itself rather than be defined against and compared with other more established disciplines (Garber, 2009). As alternative dissemination practices have been introduced, and industry has exerted stronger influence on the discipline, a potential problem has been a perception of weakening of

methodology or the dilution of the set of disciplinary standards that accompanies HCI research.

Recent debates within HCI communities about the disciplinary basis of HCI generated my further interest in dissemination, as these debates have implications not only in design research but also in pedagogy (Oulasvirta and Hornbæk, 2016). There is also an increasing interest from HCI-related academic venues in the broadening of their memberships and audiences, and this can be seen through the emergence of new submission formats available at such conferences as SIGCHI, Design Interactive Systems (DIS) and special interest group on Computer GRAPHics and Interactive Techniques (SIGGRAPH) all of which have all created different submission tracks to attract members and accommodate different research topics.

Turning now to the design of the enquiry, as a practitioner, I was attracted to HCI as a field of work that allows for practice-led research to be undertaken. Through studying in HCI I am able to combine an ethnographic approach with practice-led methodologies, and I discuss this further in the next section.

1.2 Ethnographic Approach

The adoption of an ethnographic approach to the research follows from my interest in workplace and dissemination cultures: ethnography is a methodology that is concerned with describing people and how their behaviour is influenced by the culture or subcultures in which they live, move and work. It highlights the routines of daily life, which are often unobserved or unexamined, and pays attention to how people themselves understand and give accounts of their situations (Atkinson *et al.*, 2001). Like cultural sociology, it takes the position that people experience the world through a web of meaning that includes rituals, symbols and discourses, often peculiar to the geographical space, or religion, or work culture (Burawoy, 1979; Kunda, 2009). Ethnography, therefore, recognises differences in experience, it does not claim to discover one truth but instead accepts a range of interpretations. Ethnography has been used in many studies of workplace cultures, as it describes people in their context and attempts to understand how that culture is made up, how people interact with it, and how the rules governing a workplace and its activity come to be made and understood (Munro, 1999; Kunda, 2009). An ethnographic approach, combined with attention to the materiality of the taken-for-granted things that often shape

cultural practices produces is one of the key strengths of Ethnographic research-as one of the key figures in ethnographic research put it, in 'making the familiar strange' (Mills, 2000).

Open Lab is a research group based in the computing science department at Newcastle University. Since its inception in 2008, the group has grown from a handful of computing science researchers to over 100 members (students and staff) in 2017. This increase in size was a result of the group receiving funding for several PhD training cohorts, such as the Creative Exchange (a knowledge exchange platform) and Digital Civics (a Centre for Doctoral Training). These PhD scholarships helped to recruit members from multiple disciplines including psychology, healthcare, arts and design. The group's title was changed from 'Digital Interaction at Culture Lab' to 'Open Lab' in 2015 when it moved to a different location on campus. The public funding received by the centre increased pressure on it, especially in the area of research impact, which was becoming a major policy concern at that time. As a consequence, doctoral students were encouraged to try to publish their research from rather early on in their projects. From my personal experience, although there was no explicit hierarchy between staff and students in the strictest sense, there were many implicit rules in the office culture which applied differently to individuals depending on their affiliations and networks. As a self-funded student member of this evolving workplace, I was not always included from everyday communications about research activities in the group, therefore my knowledge about the group's activities were sometime learned indirectly through gossips, which may or may not hinder my understanding of the nature of the workplace. For example, the main attraction in recruiting student or staff to research or work in the Lab was that members of the lab often introduced it as a leading HCI lab in the UK, and this self-proclaimed status was supported by the number of publications. There was a special emphasis on publications at the CHI conference, which is in turn reinforced by CHI's ranking on Google metrics where it is usually at the top of the list with the largest citations counts. The amount of published CHI papers is considered within the group as a strong indicator of the group's strength in research, and such strength is also important for the REF in the UK. However, unlike publicly-funded students, I was never pressured into submitting to CHI by my supervisors, and despite my regularly supporting my colleagues' studies as photographer/videographer, I was never invited to collaborate on research projects or co-author a CHI conference paper. Thus my study is not only UK-specific, but my interpretation

of HCI research at the Open Lab is influenced by the academics and students working there, who are accustomed to writing for the CHI conference.

The approach of an HCI researcher to researching HCI is deeply entangled in the ways that HCI knowledge is expressed and distributed through dissemination. By interrogating and critiquing these dissemination practices, I approach through this thesis wider questions regarding the nature of the discipline. At the same time, I draw attention to routine practices, to the ways that people understand the work that they are doing, and through those approaches, I hope to make the familiar practices of HCI dissemination strange-or at least, more visible, and interesting, as a subject of study. In attempting to navigate through this complex network of knowledge, discourse and dissemination I have sought to honour ethnographic principles by seeking out experiences and drawing from them a localised, nuanced understanding of how those terms are played out, and lived through in everyday work/life, in the ethnographic tradition. In coming to this study with an interest in culture as a construction, and from a varied background, I am also able to adopt an insider/outsider research identity. By this I mean that as a doctoral student, I have a research perspective on the HCI workplace, while as a workplace member, I am part of it. The workplace studies documented in this thesis in chapters 4, 5 and 6 provide an example of institutional HCI research with a distinct membership and culture. These studies are informed by ethnographic and arts practice which help unpick dissemination practice in a nuanced way.

1.2.1 Critical Art Practice

This thesis moves beyond a traditional ethnographic approach to the study of a discipline and its mechanisms by offering practice-led methods as a means to implement and consider dissemination formats. Art practice has a long and established history of creative research and theory surrounding notions of the object, materiality and visibility (Tolia-Kelly and Rose, 2012; Rose, 2016) that I believe can be useful for researchers in HCI. I demonstrate this by applying critical art practices to my understanding of dissemination as a practice in itself, in order to demonstrate that the everyday production of academic work can be considered through an arts practice lens. In doing so I aim to show that the utility of critical theory in the arts is not restricted to establishing new formats for dissemination, but instead new ways of thinking about dissemination as a practice that is in itself productive, reflexive and

empowering. Although progress has been made in HCI towards a broader understanding of the role and utility of critical art practices, notably by feminist scholars in the field, I argue that there is much more scope for this utility and demonstrate this in the thesis through my practice-led collaborations with colleagues that put observations made from my ethnographic approach into practice. I return to this in more detail in section 3.3.

1.3 Contribution to HCI

The workplace studies offer insights into how dissemination is practiced and understood by HCI researchers. These insights exemplify dissemination as routinised work, and that finding serves as a lens to consider wider dissemination practices within the HCI communities. The study of dissemination as routine is extended into an exploration into the possible futures of dissemination by critiquing and experimenting with the status quo. The implications of this challenge to routinised dissemination practices, and the renewed and re-energised conceptualisations of dissemination practice that are exemplified in the thesis are manifold. First, by adopting a practice-led approach to understanding and critiquing dissemination practice in HCI, this thesis marks out a tangible premise for meta-research on research dissemination. Secondly, through critiquing dissemination practice, the thesis highlights the areas in HCI where the relative absence of critical discussion about its own dissemination practice is limiting reflexivity as a research principle. Lastly, the thesis proposes a research framework for approaching dissemination as a practice in HCI, and expands the concept to address the rise of neoliberal culture in UK academia, and the implications for HCI rhetorical practices in developing a better response to emerging ethical challenges with technology.

1.4 Motivation

This doctoral research was initially motivated by my experience working as a freelance videographer, and particularly from academic commissions I received from HCI researchers at Newcastle University. It was through working on these commissions that I observed a prevalent dissemination culture and encountered examples of how different formats of dissemination were emerging. As someone taking an active role in the dissemination of researchers' work through my videography, I became motivated to better understand its effects and implications on research.

Based on ad-hoc observations during meetings and filming with academic researchers I discovered that video-making for research dissemination may not be as straightforward as it appears. The relationship of video and image to academic work in HCI was, to my eyes, unfixed and open to questioning. Of particular interest to me as a practitioner was the use of film as an illustration of a pre-existing project as opposed to a constructive aspect of its production as research. As a Digital Media graduate, I had established a critical lens on the role of film which made me want to question its role as dissemination material.

My initial proposal for the PhD was to focus on video-making in an HCI context, and I was particularly interested in the dynamics between knowledge production and visual representation of this knowledge. This led me to propose a practice or design-led focus that aimed to produce 'paper-like' prototypes for experimenting with the visual representation of knowledge. However, under the influence of the research group culture, where there is a strong dialogue between theories of social science and critical theory of the humanities, I eventually turned my attention to the materiality of knowledge. This abstract notion is further broken down to a more tangible subject, dissemination practice, which is made observable through ethnography and other forms of engagement at the workplace.

1.5 Research Questions

This thesis builds its enquiry on the premise of one overarching question: ***How is research dissemination currently understood as a practice in HCI?*** This enquiry is further divided into three research questions (RQs 1-3), which serves to guide different attempts to tackle dissemination from different viewpoints.

RQ 1: Why is it important to study dissemination practice?

The ongoing debates about the nature of HCI research and technology suggests that there is a general sense of disciplinary anxiety. This may damage or create self-imposed limitations on reflexive accounts for emerging interdisciplinary areas which may not fit the conventional dissemination formats of mainstream HCI very well.

RQ 2: What are the ways to study dissemination as a practice?

The methodological framework of this thesis is designed to be reflective of the complex nature of the practice-based interaction of workplace and visual cultures and the materiality of objects and artefacts used in dissemination.

RQ 3: What are the implications of critiquing dissemination for the future of dissemination practice in HCI?

That there will be feminist practice in HCI, rather than a “feminist HCI”, thus reflecting cultural sociology’s commitment to acknowledging the co-existence of divergence and diversity, while situated practice enables HCI practitioners to engage in reflexive accounting.

1.6 Summary

In this section I summarise chapters 2-7 and describe how each chapter relates to the research questions (RQ 1-3).

Chapter 2: Literature review

In the literature review chapter I establish the boundaries of the interdisciplinary resources that I draw on from STS, computing, feminist literature and practice-based studies, and show how their key ideas are relevant to the research questions and, in particular, RQ1.

Chapter 3: Methodology

In this chapter I bring together and unpack the methodological approaches from ethnography and practice-based and performance-based engagement that I use in this research. I argue that these approaches are necessary in order to capture the complexity of Interdisciplinarity in HCI, with its varied practices, and are also essential in enabled me to unpack, reveal and make sense of routinised practice at a workplace. I discuss ethnographic participation as well as practice/performance based engagement. These different ways of studying local culture contribute to the methodological resources available in HCI for studying workplace (RQ2).

Chapter 4: Video

In this chapter I discuss CHI video as an artefact and video as a dissemination medium. I describe the production of CHI videos as a genre of research videos in HCI. I present the results of focus groups and surveys on the CHI video, in which I draw from my freelance

videography experience and new membership of the HCI workplace to unpick the visuality of CHI videos as a new medium of dissemination in HCI. This chapter contributes to answering RQ2 and to the overarching question: How is research dissemination currently understood as a practice in HCI?

Chapter 5: Booklet

The Booklet chapter discusses the second study of dissemination by looking at a larger activity which involves more members of the group. I discuss my participation in the organisation and production of another dissemination artefact, the CHI booklets. I illustrate how the production of the booklets is routinised and carried out by different members of the research group. I draw connections between local dissemination practice to a wider network of the ACM SIGCHI community. I discuss how the materiality of HCI knowledges is addressed through the production of dissemination artefacts. This chapter contributes to answering RQ1 by highlighting the ways routinisation obscures dissemination practice from close study, along with RQ2 and the overarching question: How is research dissemination currently understood as a practice in HCI?

Chapter 6: Research fictions

In this chapter I develop the concept of research fictions (RF), using re-enactment as strategy to critique routinised or normative practices of dissemination. I present the process of making research fictions. I propose such constructions as a means to engage HCI practitioners in performatively critiquing local dissemination practice. Based on my arts practice I interrogate the materiality of dissemination and utilise the theory of re-enactment from performance arts to produce a series of alternative dissemination artefacts in the workplace. This chapter begins to answer RQ3.

Chapter 7: Situated dissemination

In the final chapter I discuss how the fieldwork reported in this thesis contributes to better understanding of dissemination as a practice in HCI. I draw from each fieldwork chapter (4-6) to highlight key aspects of a developing critique of existing dissemination practice, and develop a practice of reflexive dissemination from within the workplace. Situated dissemination is theorised as a framework for critiquing dissemination practice and extends the way in which HCI discourses are currently understood. This chapter contributes to

answering RQ3. In conclusion, I identify the shortage of critical dialogues and methodological resources within HCI for fully understanding and engaging with dissemination practice. Drawing on the case studies, I offer a theory of 'Situated Dissemination' (SD) which contributes to the literature in HCI on embodied thinking/interaction/design, as well as extending HCI methodologies on workplace studies, in particular feminist HCI methodologies promoting reflexive practices. Overall, SD is a constructive response to the RQs in this thesis and offers a framework for future studies of dissemination in HCI. Finally, I conclude the text with a short reflexive account of my experience studying, critiquing and researching my workplace during the development of this thesis.

Chapter 2. Literature Review

2.1 The Focus of the Review

Discussions of the nature of knowledge production and dissemination is a major field of scholarship that has branches of critical theory in disciplines across the humanities and social sciences (Hall and Gieben, 1992), and the literature has expanded as policy developments designed to encourage effective knowledge production and distribution have impacted on traditional academic practices (Deem, 2001). As a scholarly discourse with such a vast span, with many contributions and viewpoints, this literature is very generative, but reviewing it comprehensively is beyond the scope of a doctoral thesis. Indeed, any attempt to synthesise and discuss this work could result in a very substantial literature review that, despite its undoubted length, may not work in such a way as to productively establish or support the focus and direction of this thesis. I therefore adopt a principle of choice in the selection of the material reviewed here, a principle that maintains a coherent analytical thread throughout the thesis and supports the direction of my overarching enquiry. I discuss critical theories around knowledge production and dissemination that are largely based within HCI as a discipline, and that provide an ontological and epistemological basis for unpacking the properties of scientific discourse specific to HCI. I also highlight the key concepts that directly inform my exploration (through the case studies in chapters 4, 5 and 6) of dissemination practice in an HCI context. In this way I focus the literature review on selected and constructive resources that contribute to understanding of how HCI enacts its disciplinarity through academic practices, along with reflection on these practices.

The literature review is accordingly divided into two sections. In the first (section 2.2), I review literature in sociology, Science and Technology Studies (STS), and HCI on scientific disciplinarity, and particularly how scientific disciplinarity is enacted through academic writing (i.e. the production of research papers). I pay particular attention to the ACM SIGCHI (which I will predominantly refer to as 'CHI' in the rest of this thesis), the body organising the major conferences and events in HCI along with the majority of research paper publications, and its relationship to knowledge production in the wider discipline.

In the second part (section 2.3) I turn to feminist perspectives on science, including contributions to the literature from within HCI, in order to outline concerns identified in

recent critical scholarship about the nature of dominant scientific academic cultures, their claims to universalism and their work practices. I conclude the review by outlining artistic and creative feminist practices that are not yet heavily utilised within HCI but that I suggest may be useful to sustain and expand emergent feminist perspectives and approaches in the discipline.

2.2 Part One: Scientific discourses

In this section I build on my general knowledge about the CHI conference as a lens to appreciate the disciplinary culture of HCI as a field of computing science. I am particularly interested in demonstrating here the role of the CHI conference and its organisers in producing the framework of knowledge production and dissemination for HCI as a discipline. I also draw from the history and sociology of science and scientific writing and practice.

2.2.1 *Organised Computing as Science*

The Association of Computing Machinery (ACM) is an organisation of computing researchers and professionals based in New York, USA. Since it was established in 1947 it has operated as the main infrastructure for communications on research in the world of computing, and its motto is 'Advancing Computing as a Science & Profession' (taken from the slogan on the official ACM website). One of the main features of this organisation is that it is the publisher of many journals, magazines and conference proceedings of computing-related disciplines, including the field of Human-Computer Interaction. Under the ACM infrastructure, HCI is the main focus of the 'Special Interest Group on Computer-Human Interaction', better known by its short acronym 'SIGCHI' or 'CHI'. CHI is the world's largest group for practitioners in Human-Computer Interaction (HCI) from industry and academic quarters. The naming of CHI and HCI is perhaps rather suggestive that the ACM SIGCHI organisation and discourse of the wider discipline are never too far apart. These two similar acronyms are often used interchangeably in the academic literature, sometimes unintentionally. The mission statements provided on the conference website⁵ of CHI states that:

'ACM SIGCHI facilitates an environment where its members can invent and develop novel technologies and tools, explore how technology impacts people's lives, inform public policy, and design new interaction techniques and interfaces. We are an

⁵ ACM SIGCHI mission statements - <https://sigchi.org/about/mission-statement/>

interdisciplinary field comprised of academics, practitioners, and educators, and we welcome a variety of approaches to solve these complex problems'

The mission statement expresses how the organisation is a publishing environment that hosts academic research as well as, or alongside, the wider field/discipline. One of the most distinctive characters of CHI as an organisation is the size of its membership. The association of computing researchers is industrialised in the sense that people from around the world can use the same platform to communicate, which is itself supported by full-time and part-time employees of ACM who exercise the protocols of communications and publications of computing research as a scientific community.

The construction of rules and practices around conference proceedings is an established element of the establishment of disciplinary knowledge, and also features as a way of maintaining boundaries around knowledge practices in the discipline. Drawing on the history of academic disciplines, and recent debates about interdisciplinarity (Repko, 2008; Krishnan, 2009; Rendell, 2013) enables us to see the organisation of the SIGCHI as an active agent in the construction of the field, working to establish powerful knowledge and status within the academy (Deacon, 2002).

In illuminating the influence of machines, processes, organisations on shaping how we see the world of knowledge, and how we interact within it, Latour writes in his own published article:

'My word processor, your copy of Common Knowledge. Oxford University Press, the International Postal Union, all of them organize, shape, and limit our interactions. To forget their existence-their peculiar manner of being absent and present-would be a great error'. (Latour, 1994, p. 50)

The dominant presence of CHI is coupled with a taken-for-granted status within the field of HCI, partially reinforced by the Google scholar metric⁶, is so normalised that it is often confused or used interchangeably as shorthand for the discipline itself. This has the potential of rendering the organisation itself – a vast, highly profitable organisation employing dozens of people – invisible to criticism, and absent, as Latour suggests from critical scrutiny as an agent in the construction of the field. By applying Latour's idea of technical mediation (Latour, 1994) as a formula for unpicking assumptions around people and tools, the

⁶ h5-index - https://scholar.google.com/citations?view_op=top_venues&vq=eng_humancomputerinteraction

mediation that takes place between an individual and an institution, via paper submissions may be revealed and examined. Latour argues that we should abandon attempts to distinguish between subject and object, and pay attention to the way in which various technologies mediate or translate a process into a programme of action or a script. A script is the programme or action which an artefact constructs or invites, and which users or the artefact adopt or subscribe to (Latour, 1999). This approach allows the publication process to be understood and studied as a dynamic force, as acting to organize people and theories via the medium of 'paper' (or more realistically, in the contemporary context of knowledge production, PDFs). Each year a conference receives submissions from authors who help construct the discipline by suggesting research agendas and potential outcomes (Harrison *et al.*, 2007; Kuutti and Bannon, 2014). The ACM organizes these inputs and serves as a 'technology' for researchers to 'interact' with through their texts, and according to accepted scripts.

2.2.2 The Technology Industry

Strong connections to the technology industry (through Google, Microsoft and Facebook sponsorships and scholarships) highlight the professional aspect of CHI and the relationship of the industry to the discipline. Such a relationship poses the question: what capacity does HCI literature (much of which is produced directly or indirectly through industry via CHI) have to address notions of ethics in a digital age? What role does CHI play as a moral compass for tech companies, on issues of political bias, privacy, child safety and so on? (Richards and King, 2014; Jasanoff, 2016). With the number of controversies around ethical issues for these major technology corporations increasing on a daily basis, it would seem more urgent than ever to understand better the relationship between HCI and CHI.

The annual CHI conference attracts attendees from industry and academia, and since the 1980s the gathering has regularly attracted over 1000 contributors⁷. The conference has close ties to the technology industry with Google, Microsoft and Facebook listed regularly as sponsors (or 'champions' for major sponsors). The industry presence creates a network of exchange between academics and professionals, as well as recruitment opportunities for HCI students. Many PhD students and post-doctoral positions in HCI are directly sponsored by

⁷ History of CHI conference attendance - <https://sigchi.org/conferences/conference-history/>

industrial partners such as Microsoft Research. In these cases, students are jointly supervised by both academic (university-affiliated) and professional figures from industry.

In this context, it is perhaps the case that the blurred lines between HCI as an academic discipline and CHI as an industry-affiliated and professional organisation are present throughout all stages of academic activity within HCI. This relationship is made more problematic when considering the number of HCI research papers that are produced through a framework established by CHI. The way HCI discourse is currently produced and hosted in this manner potentially reflects the stake HCI academics have in the technological economy and in policy for its regulation and development. As such, any 'critical technical practice' (Agre, 1997b; Dourish *et al.*, 2004) produced as part of this discourse is also limited by it: the knowledge production process inevitably affects the extent of its criticality and its capacity for an independent outlook.

2.2.3 Critical Technical Practice

Close ties to industry reinforces the need for technological ethics to be developed as part of 'critical technical practice' proposed by Philip E. Agre (Agre, 1997b). Agre's influential essay illustrated a reflexive account of his discovery of critical theories and the challenges they presented to a technically-oriented research framework such as Artificial Intelligence (AI). The vision he developed for other scholars to engage in such criticality on technology was that:

'A critical technical practice will, at least for the foreseeable future, require a split identity – one foot planted in the craft work of design and the other foot planted in the reflexive work of critique' (Agre, 1997b, p. 155)

Perhaps Agre saw the struggle with this vision taking place in academia and since his disappearance from the academic community (Masís, 2014), the discussions on such criticality have been monopolised by organisations such as the ACM SIGCHI which organises events that are state funded (NSF in the USA) and Silicon Valley sponsored. One might argue that these affiliations also configure the discourses to some degree by providing the financial support and career incentives for perspective students (Etzkowitz *et al.*, 1998). HCI manifests itself in computing and design endeavours and has differentiated itself from other disciplines

along these lines since its inception. In recent years the rise of experience-centred, socially-engaged HCI research (Wright and McCarthy, 2010; Clarke *et al.*, 2014) means that the discourse has much more to offer on issues of public concern that may previously have been deemed irrelevant to computing-centric disciplines. Agre's rumination on AI led to a series of discussions in HCI about the role of critical theories in this typically scientific discipline (Dourish *et al.*, 2004; Light, 2011). These interests are best summarised by his claim that: 'Technology at present is covert philosophy; the point is to make it openly philosophical' (Agre, 1997a, p. 240). Agre acknowledges here the lack of capacity of technology on its own to be the differentiator between disciplinary practices, and suggests the need for computing-oriented disciplines such as HCI to re-evaluate their disciplinary boundaries and concerns and acknowledge the philosophical, ethical and social issues embedded in HCI research.

Accordingly, the key premise for my interest in the ACM SIGCHI is how HCI, saddled with a scientific historicity, continues to enact its scientific disciplinarity through publications. In particular, I am interested in how HCI maintains a scientific, technology-oriented outlook through or via the CHI platform, and in what ways the organisation allows for or hinders the admittance of broader societal and philosophical concerns within HCI research. The practice of the vast majority of research publication is writing, and in the case of HCI scientific writing. In the following section I discuss how this is regarded as a genre of writing, drawing from literary, sociological and HCI reviews on science and scientific knowledge.

2.2.4 Scientific writing

Academic disciplines have evolved over time, and have adopted the practices and discursive resources of the more established and more powerful fields of knowledge as they did so (Collins, 1974; Shapin and Shaffer, 1985; Bazerman, 1988). In the current context, with the increase in use of, or at least references to, 'science' as a guide to action, in policy and in wider society, the pressure on disciplines to display scientific characteristics has grown. This 'scientification' of knowledge is evident across a range of disciplines, including social sciences and humanities, where a shift towards the use of objective, large scale data-driven enquiry is visible (Stratilatis, 2014). Against this backdrop, newer disciplines perhaps feel it necessary to underline their scientific and objective practices, and also, perhaps, find establishing newer, more divergent principles and practices, more challenging. These new

fields of knowledge production need to establish shared rules and practices, and do this largely through adopting conventions, including the conventions of scientific publication. As Pyne and Potter comment:

'...intellectual work became employment, and, in the academy, it was divided into disciplines with special content and methods. This relationship to nature and the human world through the sciences and humanities is a way of making knowledge and a way of knowing how to do it — a social organisation of knowledge' (Hartman and Messer-Davidow, 1991, p. 267)

This form of knowledge-making, that mimics existing power structures within the academy, and uses the discourse of science and scientific practice, is critically analysed as scientification, and creates the world it describes, it is a social practice like any other kind of practice. As Law suggests, knowledge practices:

*'become sustainable only if they are able to create knowledge (theories, data, whatever) that work, that somehow hold together, that are convincing and (crucial this) do whatever job is set for them. But then secondly and counter-intuitively, they have to be able to **generate realities** that are fit for that knowledge' (Law, 2009, p. 240)*

There is thus a relationship between the discipline and its rules and practices, that is mutually-reinforcing, and that constructs knowledge in particular ways, but which may also contain tensions, between established rules and practices, and new fields of enquiry. HCI is a relatively new field, that straddles different disciplines: it is a wide-ranging, interdisciplinary and cross-disciplinary field of research. Indeed questions about whether HCI is a science have re-ignited the old debate that tries to divide and categorise science and arts (Williamson, 2011). Yet the logic of the scientific report remains pervasive in HCI literature. Indeed, as far as HCI discourse is concerned, writing and the research it contains can be applied in largely the same format, for example the CHI conference provides a 'CHI Proceedings Format' which uses the citation style created by ACM⁸.

This is a process of codifying practiced by the organisation. As indicated above, sociological literature has highlighted the practices adopted in constructing scientific traditions that disciplines adopt to in order to make themselves more persuasive and powerful. Scientific

⁸ ACM citation style - <https://www.acm.org/publications/authors/reference-formatting>

practice is a rhetorical device. These codified structures provide the rules within which research is reported (Martin, 2011). One of my earliest memories as a new PhD student in HCI is receiving a tip from a senior academic that if I was planning to submit a paper to a conference it is best to write in the corresponding template from the start, supplied by ACM and pre-formatted. Indeed, some of my earlier assignments for my first year of PhD training were expected to be written in ACM templates, despite not being directed towards, for example, the CHI conference.

Scientification, as reflected in the rules surrounding report writing and publication in HCI, reflects the growth of the field, but also highlights the importance of context. Contemporary knowledge production in the academy is competitive, because of the ways that regulatory mechanisms such as the Research Excellence Framework⁹, so that competition is encouraged between individuals and institutions as the route to excellence. Competition requires shared standards, so that the act of writing and publication is increasingly standardised, in order that outputs and impact can be measured and compared (Strathern, 2000; Oancea *et al.*, 2018).

Thus, it is important to acknowledge the politics surrounding research publication in contemporary academic scientific writing. In the light of the nature of scientific rhetoric and the dominant positioning that follows from having such discourse, it is a direction that sees contemporary practices of voluntary peer-review, free labour in, for example, journal editing, grant application reviewing, and proof reading papers for publication, constantly reaffirm themselves among researchers as ‘doing it for the discipline’. This knowledge production is commonly known as science communication (Weigold, 2001; Pike and Gahegan, 2007), which became a focus of public debate when Tim Gowers, a mathematician at Cambridge, wrote a blogpost expressing his decision to withdraw from voluntary peer-reviewing¹⁰. The protest was joined by other academics and has since been –perhaps optimistically-described as the ‘academic spring’. Gower’s action serves to remind us that there is a political and financial economy supporting supposedly objective scientific practices.

⁹ <http://www.ref.ac.uk/publications/2017/initialdecisionsontheresearchexcellenceframework2021.html>

¹⁰ <https://www.theguardian.com/science/2012/apr/09/frustrated-blogpost-boycott-scientific-journals>

These processes in turn have implications for the way research is organised as work. They highlight the danger that knowledge production does not generate more understanding about this work, but instead knowledge becomes about organising research (Larner and Le Heron, 2003). So how is science understood through the language of scientific writing? And how does writing become submission?

2.2.5 Problematising Dissemination

The term dissemination has come to represent various academic practices and to be taken for granted in research work in ways that render it inadequate for describing what it tries to represent. It has become yet another standardised practice, with many sites providing guidelines on best practices (see, for example <https://www.nihr.ac.uk/funding-and-support/documents/funding-for-research-studies/manage-my-study/How-to-disseminate-your-research/dissemination-guidance.pdf>). Whether the understanding of it is approached as an issue for philosophical contemplation or treated as requiring managerial intervention, there is a clear need for discussion and interrogation of our understanding of the organised channels which are currently available-and indeed obligatory- for knowledge exchange. Thorin described scholarly communication and its process as taking place in three distinct aspects:

'(1) the process of conducting research, developing ideas and communicating informally with other scholars and scientists; (2) the process of preparing, shaping and communicating to a group of colleagues what will become formal research results; and (3) the ultimate formal product that is distributed to libraries and others in print or electronic format' (Thorin, 2006, p. 221).

With regard to research processes in an HCI context, where projects often yield electronic objects, the question arises whether Thorin's description is already overtaken by developments in digital technology that may disrupt this conceptualisation of knowledge production in discrete, sequential stages. If that is the case, as my discussion above of the idea of technical mediation suggests, then there is a need for exploration of the impact of these technologies on the dissemination processes, and their role in terms of configuring or blurring the distinctions between conventionally-assumed processes of production.

Research, in the dominant official discourse of REF assessment, requires the production, transfer and presentation of knowledge. Despite the promotion of interdisciplinarity in recent policy, the REF remains dominated by disciplinary categories and rules, and the performance of knowledge production that gains status and recognition is, it seems, one that adheres to these rules, and is recognisable to the peer community sitting in judgement of quality and excellence. Given that framing of activity, it is unsurprising that within each disciplinary domain particular kinds of knowledges remain privileged and are deemed acceptable and communicable (Power, 1997; Larner and Le Heron, 2003), while others are tacitly or explicitly excluded. The way in which this knowledge production process is predominantly supported is through the production of peer-reviewed papers.

2.2.6 *The Academic Paper*

Looking at dissemination as technical mediation brings the mediators and the scripts, in Latour's terms, into the foreground: the academic publishers and the processes involved in securing paper publication. Dissemination in this mode is not like that of public engagement, where research outputs may be packaged as part of a press release for a general public audience. Instead dissemination is better understood as a ritualised process of constant exchange between an individual and institutions, particularly those who host discourse (i.e. publishers). While the politics of particular publishing models have been extensively discussed in the press, very little is understood in terms of the events that surround the publication of a paper by an author and even less is discussed in relation to what happens when a paper is rejected. These are largely invisible, or private, processes, despite the fact that in our daily routines, within our academic workplaces, academic writing is constantly in process and making submissions to journals and academic publishers is considered a part of the obligation and routine tasks of academic work. The lack of discussion in the literature contrasts sharply with the lived experience of most academic workers, who are very familiar with the routine expressions of writing-related stress in the workplace, and can offer anecdotes about colleagues shouting at their computer screen or lamenting that their writing does not make sense. The frequency and familiarity of the processes involved in preparing materials for submission render them invisible as subjects for study, and they are not often interrogated in the workplace.

Interrogation of HCI is evidenced mainly in the HCI literature published by CHI, which discusses the nature of HCI. This is a recurring theme in recent years within the research community, and members of that community take up positions that differentiate them from one another according to the sub-domains and methodologies that they advocate. A distinctive feature of this literature is that any intellectual advance in HCI is often described without reference to other disciplines; HCI is presented as growing and altering independently. Yet, at the same time, advances in HCI are seen to occur as a consequence of the influence of new ways of thinking that are derived from other disciplines. Thus, there is attention to the arrival of what is perceived or labelled as an 'external' school of thought, for example, feminism, politics, and so on. This literature is dominated by established scholars who argue for the adoption of these externally generated theories, and who also bring them into alignment with HCI agendas. In so doing, these scholars create new sub-domains of HCI (i.e. Sustainable HCI, feminist HCI and so on). These developments are typical of disciplinary development and capture a process of continuous consolidation and sub-division (Becher and Trowler, 2001). Seeing them in this light enables the discipline to be perceived as a construction, with a history. That history is often written as a series of 'waves' or 'turns' that together provide a retrospective account of the pathways of development. These accounts often chart progress towards ever higher standards of excellence, and rarely connect to the contextual factors that influence the success or otherwise of a discipline in becoming established. They are also inattentive to the ways in which the rules of disciplinary formation become inscribed in the individual. As Messer-Davidow notes, following Foucault:

'But as Foucault reminds us, a piece of work is not good; it is "in the good" that is authorised by the discipline. Just so, an academic is "in the knowledge" constructed by his discipline, but to the extent he believes this knowledge is "in him" he will not see how disciplines, professions, and institutions have constructed it and how he might change them' (Hartman and Messer-Davidow, 1991, p. 285)

Yet some of these histories also prompt greater introspection about the nature of the discipline, and encourage academics in the field to ask the question 'what is HCI?'. Such a question is also very typical of developments in the history of disciplines, and reflects anxieties about status, as well as changes in pedagogy, along with anxiety among practitioners, as new criteria emerge to reflect the changing field, which may contribute to concerns about standards. The result of such collective anxiety is obvious from the growth of paper titles constructed as 'prefix-HCI', proposed by leading scholars who are attempting

to clarify or consolidate the status of the discipline. These attempts to codify and structure the debates over the identity of HCI may reduce anxiety or address pedagogical challenges, but very little of this HCI literature refers to or seems to understand that its own production (as academic papers/PDFs) is part of disciplinary identity in-the-making, nor does it take this as a key subject for research.

In attempting to identify a literature that sees the processes of knowledge production as central to the issue of disciplinary identity, and that has strengths in uncovering concealed or overlooked dimensions of work and knowledge, including a stress on contradiction and complexity, I became interested in feminist critiques, both within and beyond HCI, that help situate and expose the affective and constructed nature of knowledge production. This, then, is the subject of part two of this review.

2.3 Part Two: Feminist critiques of scientific knowledge

Feminist critiques of scientific knowledge are powerful as tools for identifying, from a different starting point, structural issues that may be inherent in disciplinary knowledge, and which are less immediately visible or obvious to the producer of such knowledge. As Haraway puts it:

'A and not-A are likely to be simultaneously true. This correct exaggeration insists that even the simplest matters in feminist analysis require contradictory moments and a wariness of their resolution, dialectically or otherwise. 'Situated knowledges' is a shorthand term for this insistence' (Haraway, 1991, pp. 110-111)

2.3.1 Situated Knowledges

The concept of situated knowledges (Haraway, 1991) offers a consistent resource for HCI researchers engaging in research on the field of study itself. Like many feminist approaches, it is alert to the dangers of scientification, critical of the rules of the game of academic status, and supportive of differences in interpretation and experience. It acknowledges the positionality of workers in a field of study which is characterised by complex networks of people holding a widely divergent range of perspectives on an issue. The development of the concept of situated knowledges, along with standpoint theory (Bardzell, 2010; Tong, 2013) has contributed to the growth of a feminist and social justice agenda within HCI. A major consequence of this perspective is the advocacy of greater reflexivity within research when

reporting on researcher-participant relationships (Bardzell and Bardzell, 2011; Clarke *et al.*, 2016). Adopting such reflexivity may, however, cause tensions in the reporting of various perspectives in the traditional paper format that derives from scientific writing, as taking the position of authority in authoring often reduces reflexivity to a static unmovable positionality or identity, and risk reducing reflexivity to a rather token gesture. The advantage of working with situated knowledges as central to HCI is illustrated in the claim by Harrison *et al.* that ‘...detailed, rich descriptions of specific situations become particularly valuable as a knowledge product, as compared to generalized formalisms’ (Harrison *et al.*, 2011). Attention to variation, context and rich detail sustains reflexive practice, and mitigates against the adoption of a universalist viewpoint.

Haraway’s work discusses how to utilise reflexive practices and understand them as part of a collective approach to knowledge. This is a strong version of reflexivity, that works against hierarchies of knowledge between researcher and ‘subject’, and that creates co-construction as a principle of knowledge production. As Wasserfall explains:

... the use of reflexivity during fieldwork can mute the distance and alienation built into conventional notions of ‘objectivity’ or objectifying those who are studied. The research process becomes more mutual, as a strategy to deconstruct the author’s authority. (Wasserfall, 1993, p. 25)

A further, important point is that contradictory approaches and differences should not be smoothed over or eliminated in the production of knowledge, but rather recognised as often more informative and useful than synthesised and directed knowledge forms:

‘Experience is a semiosis, an embodying of meanings (de Lauretis). The politics of difference that feminists need to articulate must be rooted in a politics of experience that searches for specificity, heterogeneity, and connection through struggle, not through psychologist, liberal appeals to each her own endless difference. Feminism is collective; and difference is political, that is, about power, accountability, and hope. Experience, like difference, is about contradictory and necessary connection.’ (Haraway, 1991, p. 109)

‘Scientific discourses are ‘lumpy’; they contain and enact condensed contestations for meanings and practices’ (Seidman and Alexander, 2001, p. 277)

However, delivering the full promise of situated knowledges is often frustrated by the practices of production of research papers, as the dominant forms of paper production and writing remain in place, and the products are subject to the established rules in conferences

and journals that were and are constructed for non-situated practice. These knowledge production forms remain dominant, and as consequence, attempts by the HCI literature to respond to feminist critique, to be inclusive, or to be attentive to context, as well as to extend the range of theoretical resources on which it draws, there is no escaping from the situated-ness of HCI authors and their outputs within an academic framework centred on paper production and submission. This situatedness is reflected not only in the dominance of the paper, but in the academic styles that are preferred in paper construction, where the apparently objective, neutral and distancing style is adopted in discussing a 'research project' or in using the form 'we', in making submissions for anonymous peer-review.

In the new Humanist-HCI agenda Bardzell et al suggest research could be communicated via a 'humanist essay', a format where 'an author writes in a distinctive voice, allowing her to speak subjectively of her experiences and processes of thinking.' (Bardzell and Bardzell, 2015) This is an attempt to break with the rules and rigidities of the traditional 'scientific report', with its logical ordering of reporting and discussion, and an attempt to extend the conventions of the paper format. However, this approach privileges another set of rules, those that govern literary style, and thus leaves in place conventional, established assumptions about appropriateness and quality. The essay style, with its often implicit rules, is well established as a form of writing for publication, and its adoption implies pursuit of a strategy for 'acceptance' by potential peer-reviewers. A critical perspective on knowledge production implies some distance from strategies of acceptance: breakthrough agendas, with critical awareness of how positioning in society impacts on how things are known, should not assume a desire for acceptance within the institutional context.

In sharp contrast to the Humanist-HCI approach, but working with well-established strategies in the history of the disciplines, Kostakos argue for a more 'scientific' HCI (Kostakos, 2015). They argue that most research papers in the field should be written in objective language (such as that of mathematics) and that reports of findings should adhere to the motor-themes they have identified within the HCI corpus. This strategy ignores the extent to which the adoption of scientific practices may be seen as 'scientification', which uses a particular discourse to achieve respectability and influence, and suppress dissent within a field of enquiry (Becher and Trowler, 2001). As discussed above in reference to Gower's case and

the academic spring, the push for objective science is, in fact, a political move implicit in the publishing economy and the desire to make HCI research more categorical.

In this context, standpoint theory is relevant to the discussion, as it emerged as an empirical framework for “constructively” critiquing dominant power, including power exercised in the construction of dominant knowledges. Feminist scientific knowledge and feminist approaches to objectivity is a resource for third-wave HCI scholars (Harrison *et al.*, 2011; Rode, 2011a). They offer arguments around participatory, embodied design (Dourish, 2004) and advocate for better, more developed reflexivity in research practice. These are concerns, in this perspective, that are shared by both researcher and researched. In short, the focus of feminist critique of positivist science in HCI has been to change how HCI considers the ‘other’. The process of change from first-wave to third-wave HCI can also be understood as a history of growing influence from critical theories on system design (engineering), but the origins of theoretical influence are divergent and diverse (Harrison *et al.*, 2007; Light, 2011; Benford *et al.*, 2015).

As indicated earlier, reflexivity is a core preoccupation of these different disciplinary approaches to critical theory, and is further discussed in digital anthropology, ethnography, and feminist theories in an HCI/CHI context (Rode, 2011b; Dourish, 2014; Clarke *et al.*, 2016). The insights from these varied literatures are implicit in critiques of the language of scientific research. Reflexivity, and the linear practices that ‘surround’ scientific discourse, needs to be made visible in order to negotiate between the differing qualities of a work:

‘Whereas time in the semiotic is cyclical (repetitive) and monumental (eternal), time in the Symbolic Order is the time of history-linear or sequential time pointed toward a goal. Thus, the kind of writing that is linear, rational, or objective and has normal syntax is repressed, whereas the kind of writing that emphasizes rhythm, sound, and color and that permits breaks in syntax and grammar is fundamentally unrepressed because it has room for whatever disgusts and/or horrifies us. Kristeva believed that a liberated person is someone able to acknowledge “the play of semiotic and Symbolic”-the continual vacillation between disorder and order’ (Tong, 2013, p. 231)

2.3.2 Reflexivity

Reflexivity, as a concept, is central to my argument, and although that concept is the source of much debate within a range of disciplines, as I have tried to show, it does not appear as a way of thinking or organising research in relation to publication. Ironically, much of the discussion of reflexivity is not itself reflexive about academic papers, so that reflexive practice ultimately manifests itself as an academic object directed towards submissions. What is of interest here is that even within a feminist framework, the structural implications of codified research papers as themselves potentially of interest are often overlooked. As a consequence, the systemisation of knowledge as generated through ACM SIGCHI is still an invisible mechanism, even from a highly critical perspective.

This point raises a further issue – the definition of knowledges that exist in the field, and that are understood-perhaps implicitly as the outcomes of research and knowledge production processes. For the purposes of this thesis, the key issue is that terms such as ‘knowing’ or ‘knowledge’ are discussed without reference to the medium in which they may be manifested, or the domain from which that knowledge is viewed. Yet knowledge, as feminist scholars such as Haraway remind us, is not a universal term (Haraway, 1988). In much of the HCI literature it is not clear when an author refers to knowledge whether that is understood as a cerebral experience, ontologically associated with a methodology, or if the knowledge is a material object such as a piece of writing that reports the outcome of a methodology.

My main purpose here is not to be overly critical of the academic practices of writing papers, or to suggest their replacement as a core medium of scientific communication, nor am I offering another lens through which to read text. Instead I want to draw attention through this literature review and the research reported later in the thesis to the fact that an academic paper is an item often treated as being without materiality, as being a universal and a pure representation of knowledge. My purpose in doing this is to expand notions of dissemination. Through a focus on ‘paper-making’ as part of the practices surrounding knowledge production, understanding of other research practices such as reflexivity as developed through feminist critique, may be encouraged. As argued earlier, so far in HCI very little has been unpacked in terms of paper submissions, despite our shared knowledge as authors who have experienced the problems and complexities of drafting a paper, and the compromises and adjustments that may be required to meet the need for professional

and institutional developments, that process remains rarely documented or interrogated through traditional reporting styles in academic papers.

My focus here is on the everyday production of papers rather than an analysis of the discursive norms that a conference or journal submission may prescribe. An accepted pupil in her discipline will often repeat her master's teaching and follow the protocols of paper submissions. (See (Agre, 1994; Osborne, 2015) for notions of disciplinarity and how it is thought to affect academic practice). In this way, as we have seen from the discussion of the construction of a history of HCI above, an academic discipline is established - through succession. However, I have also noted the ways in which discipline is necessarily dynamic and subject to change, in terms of new research agendas and social context. Critical consideration of the modes of paper production enables critical scrutiny of the meeting of dynamism and tradition, and may offer ways of establishing new modes of knowledge production. Here theories of Science and Technology Studies (STS) and feminist STS can be utilised to guide a critique of papers and their production. STS is sometimes criticized for being apolitical, or complicit in reinforcing the power structures of institutions because of the attention it pays to detail (Latour, 2007), however I suggest that STS has utility in assessing larger political issues from a practitioner-centric angle. Aspects of feminist STS, in particular the concept of 'situated knowledges' (Haraway, 1988) referred to earlier, can lead directly to changes in one's individual practices in a workplace. Thus, an STS framing of the critique enables a focus on the mediation between research and an institution via the production of papers, while feminist STS draws our attention to the mechanisms of knowledge production (in the case of this thesis, the HCI workplace). This thesis aims to produce a critique that guides us to considering HCI as a discipline as constructed by the dissemination practices it affords. In other words, I approach the question 'What is HCI?' by contemplating the question 'What is a Paper?' and understanding our relationship to their production. In the next section, I try to bring the theoretical resources outlined so far in this chapter into play and into relationship through an account of my own work practices that highlights the materiality of the objects that construct my work, that also locates my work in a particular context, and that leads on to developments in what I call 'emergent' dissemination practice.

2.3.3 *Desktop Reflexivity*

Since I started practicing videography I have kept a file folder named 'jpg' on my laptop. Over the last ten years, whenever I acquired a new laptop I would initiate it by copying the same folder over. 'jpg' started as a random folder where I store JPEG files and other digital images I created for work. As I became more engaged in academic research, the folder also became where I store journal articles (PDF files) and other research fragments. The same folder continued to be the destination for dumping files that I was most preoccupied with. Eventually this became my PhD folder. However, I never changed the folder name from 'jpg' to 'phd', perhaps because I did not want to jinx it somehow through the ontological shift this name change suggests. The folder name provided me with a sense of continuity for how some of my research ideas were collected, and served as a constant reminder that these ideas are also files with a distinct property and materiality.

Indeed, '.jpg' is the file extension name for JPEG images in computing, which stands for Joint Photographic Experts Group. PDF, in contrast, stands for Portable Document Format. These file extensions represent two very different approaches to digital imaging (Vector vs. Bitmap). PDF was conceived as the replacement for paper, as part of the paperless office imaginaries that started in the 90s, and in which texts are saved as independent information in a PDF file which means fonts can appear sharper and are scalable. JPEGs on the other hand is a type of image compression that does not distinguish between text and image and is more commonly used for images captured by cameras. My point in elaborating on these differences is that because of computing devices and techniques we have grown accustomed to appreciating the contents without viewing the files that re/present imaging. The file extension is enough to inform us of the nature of knowledge held within the document. The device and techniques of computing renders some things visible to the human eye while obscuring (black-boxing) the computing language's own visuality and materiality.

Hunter describes this as the textuality of science:

'Computing works with media as if they are self-evident, it works with second-order textuality as if it were in negotiation with the actual'. (Hunter, 1999, p. 169)

The history of digital image compression is also a history of female representation, or perhaps a history of how male expertise and visibility is an undercurrent throughout so much of computing. The industry standard test image for compression of the JPEG, i.e. the image that the Joint Photographic Experts Group utilised to develop the file format, was a Playboy image of a woman named Lena Söderberg¹¹. I state this to illustrate the extent to which some frameworks are embedded within the 'materiality' of digital formats that are used as part of knowledge production.

By providing the details of a file folder on my computers, I want to draw attention to the materiality of this thesis and the way it was constructed. It is rooted in a specific digital location. Such awareness of the situatedness of knowledge need not involve expensive and complex activity, but it does require awareness that the process takes place over a computer's desktop. This digital space compresses and reorganises visual, material and other forms of knowledge and is part of the production of research artefacts such as research papers.

2.3.4 *Visibility and materiality*

Across disciplines in the last few decades, there has been a visual and material turn which reappraises the role of the visual and latterly the material, in knowledge production. Rose and Kelly describe the arrival of visual methodologies in social sciences:

'Visibility / Materiality is an emergent orientation of research practice that is inevitably critical and constantly reflexive of the power play between representation, text, practice and technologies of production, play and performance. The legacy of materialism within cultural theory is extended, enlivened and made meaningful through an approach that recognises a world of more-than signification through text, narrative, line and object. At the heart of the collection is an attentiveness to a reconceptualisation of the visual (through theory, method and practice), as an embodied, material and often politically-charged realm.' (Tolia-Kelly and Rose, 2012, p. 3)

¹¹ 'The Playboy Centerfold That Helped Create the JPEG' - <https://www.theatlantic.com/technology/archive/2016/02/lena-image-processing-playboy/461970/>

Despite this recognition of the visual and material, discussion of the uses of new media for dissemination has remained a marginalised topic and perspective in CHI literature and is not yet claimed by feminist HCI authors. In fact, a consequence in HCI of this wider shift towards other forms of knowledge has been the establishment of more design-oriented research conferences and events such as the ‘Research through Design’ conference (Wallace *et al.*, 2014) which is not affiliated with CHI. This conference and the research community it represents favours material thinking and a focus on making and producing artefacts (Zimmerman *et al.*, 2010; Gaver and Höök, 2017). However, such conferences polarise practice and theory, and in effect situate themselves as distinct from CHI in the sense that the theoretical ‘restrictions’ of CHI and its associated format are lessened, allowing more experimental design processes and presentational formats. Although there are positive aspects to having a non-CHI venue for alternative formats in HCI presentation, the result is to effectively marginalise design-oriented and ‘unusual’ formats by omitting them from CHI and relegating them to alternative venues. This is partly a result of CHI’s dominance around knowledge production and validity within the HCI discipline, and offers an example of the strategies followed by disciples in maintaining boundaries around their knowledge practices. Researchers in the Research-through-Design community discuss how to apply aesthetics, in order to further the ‘development of a hermeneutic community capable of actively critiquing and interpreting the significance of these exemplars’ (Bardzell *et al.*, 2015, p. 2094). Exemplars in this context are artistically produced design objects. However, suggesting that Research through Design’s main corpus should be the reading or interpretation of exemplars by a group of authors in a self-selected community, one set of well-defined, highly crafted discursive norms and their associated formats (i.e. objective science and peer-reviewed papers) is replaced by another, with a set of highly crafted discursive norms and formats (e.g. RtD and intermediate knowledge (L *et al.*, 2013; Höök *et al.*, 2015), annotated portfolios (Gaver and Bowers, 2012), and sequential art/comics (Rowland *et al.*, 2010; Dykes *et al.*, 2016)). Thus, the tension between encouraging dynamic change and establishing disciplinary rules is illustrated once again.

2.3.5 New Formats in HCI

These attempts are also present in the repeated efforts at the CHI conference itself to introduce a new format for showcasing work in various stages of completion. The ongoing attempts by committee members to encourage different disciplines to enter CHI is revealed

in such innovations as workshops, special-interest-groups, and in multimedia tracks such as design theatre, interactivity, video showcase and so on (Kaye *et al.*, 2013). To some degree, these changes in submission tracks reflect the changing academic zeitgeist each year, and some of these new tracks progress to create trends that in time become accepted submission formats. At the same time, it must be acknowledged that the variety of submission formats suggests an openness to different ways of communicating research, compared with other more 'traditional' academic disciplines both in the sciences and humanities. The calls for submissions to alternative formats are intended to be inclusive of research topics, or to accommodate projects at different stages of completion. Meanwhile the standards of submissions are regulated by committee members of the community who create templates and submission protocols for other members through which to disseminate their work. However, alongside other prominent HCI venues, paper remains the prime medium for researchers in which to communicate their knowledges and formulate submissions.

The CHI conference accommodates varying degrees of textual accounts in its submission tracks, and in recent years there have been new formats such as 'CHI theatre'¹² and 'CHI stories'¹³ intended as alternative dissemination media. While it is evident from the conference organisers' perspective that these new media of dissemination are more capable of accommodating diverse contents, their top-down calls for submission fall short of the reflexivity necessary to encourage HCI practitioners to be critical of HCI's disciplinarity. That is, while these new media submission tracks have added to the richness of the CHI conference proceedings, what is being diversified are the dissemination media, not the voices or perspectives expressed through these media. Thus, diversity is being performed through the conference proceedings as a means of achieving and sustaining the power and status of CHI as a prominent HCI venue, as it draws in new critical thinking as its sub-disciplinary tracks. This might also be seen as a strategy for taming, or domesticating, divergent thinking, often used in maintaining disciplinary unity and keeping tensions 'in-house' (Becher and Trowler, 2001). In addition, these new formats of submission may also encourage a rather arbitrary coupling of HCI knowledges and a selected medium. From a critical perspective, the processes of reflexive development that artists might engage in

¹² http://www.chi2008.org/design_theatre.html

¹³ <https://chi2017.acm.org/stories.html>

while “thinking materiality”-regarding mediums such as PDF, video, live performance or text - are reduced to matching the production value of these media to the accepted notions of “completeness” of a research project.

The construction of these submissions as ‘test sites’ for experimental dissemination may be seen as rather limited attempts at the integration of non-paper submissions, without fully responding to the implications of new media. In few cases is the production of the work, and the nature of the submission itself, radically reflected on in an attempt to develop an understanding of or to challenge the discipline and its established practices of knowledge production and dissemination.

2.3.6 Emergent Interdisciplinary Practice

Responses to scientification, and to feminist critiques of scientific discourse, are substantial issues in terms of the future of HCI as a discipline. They are also about interdisciplinary futures, as HCI claims to be interdisciplinary. However current academic institutions struggle to accommodate interdisciplinary knowledges that are ‘in-between’ (Lyall, 2013; Hunter, 2015). As indicated earlier with reference to the Research Excellence framework (section 1.1.3), interdisciplinary work struggles to gain acceptance where disciplinary traditions and status claims dominate, and academic papers and journal publication largely maintain existing status hierarchies. New conference submission formats in the last 10 years, e.g. text, video and performance, are still attempting to transform these formats into something equivalent to the academic paper. It is important to consider these formats more closely as mediums for dissemination. An interesting early example of reflection on video-making in HCI, published in the CHI bulletin in 1989, offers a poignant moment in which a videographer observed academics in a rather precise way and described dissemination (which he refers to as communication) from the perspective of video professionals producing research videos with researchers:

‘A researcher’s primary product is communication of his or her research, and the primary vehicle for this communication has traditionally been the research paper. Although researchers often work with a secretary, graphic artist, and photographer to produce their papers...the final paper contains ideas and writing which belong almost exclusively to the authors. In addition, the result is a detached work in which the personality, look, and speech patterns of the authors play little or no part in the perceived validity of the paper. In fact, even the quality of writing is secondary to the content, since the reader is hardly expected to compare the paper with

Shakespeare or even Scientific American. As the research video augments and sometimes replaces the paper, the look of things suddenly becomes much more important since the researcher himself/herself becomes the medium by which the content is communicated'. (Chow, 1989, p. 84)

In my view it is highly significant that the individual who expressed understanding of the fundamental shift in the nature of knowledge production (as an augmentation or replacement for the paper) was a videographer, coming to HCI from outside the discipline. This highlights a key difference in approach where the format, or the medium, is taken as the primary agent in the production of research, rather than simply a technology in the service of research. Rather than 'gathering' formats into the disciplinary constraints of HCI, this approach questions what happens to HCI when it is expressed through a different format, and its associated discipline (e.g. film-making). Dominant attitudes towards art practice in HCI can also be understood through the way fine art practice and art history is positioned as outside the frame in HCI literature (For example, see Rogers' (Rogers, 2012) drawing parallels of HCI history to the history of art as the parallel suggests non-interaction between art and technology). This leads me to make the argument that it is necessary to review critical artistic practices that are outside of HCI's knowledge base, and outside of scientific modes of writing and production, and yet still concerned with the dissemination of transfer of ideas and knowledge. I review these to establish my approach as a practitioner interested in furthering reflexivity, and the visual and material turn, not through colonising artistic practices into the HCI discipline, but instead observing what happens to HCI knowledges when considered through these practices. I describe this as an interdisciplinary practice in the true sense of existing between two disciplines, HCI and critical art practice, belonging fully to neither.

There is a general distrust of art practices in HCI, as it is currently understood as yet another form of visual research output, as opposed to an established everyday researching practices. My approach to art practice is built-into this thesis as throughout the research I acknowledge, and indeed highlight, the 'internal conflict' that arises from constructing a critique of academic papers, while adopting the traditional research-based thesis as my medium for this construction. I wish to demonstrate that such internal conflict can be seen as a resource for creative practice in HCI, especially for developing productive critiques of ongoing HCI research. In this thesis, and drawing from the literature discussed in this chapter, I am hoping to encourage the CHI community to move beyond the need to answer

the question 'What is HCI?' as that question only results in the various domains of HCI responding with conflicting accounts of the nature of the discipline. Instead I am looking to focus attention the way HCI knowledges are produced through paper and other submissions to CHI and in other venues. In this way, and working through an STS lens, for example, I hope to show that there is utility in diffusing the conflicts across HCI domains and acknowledging the diverse nature of HCI research.

2.4 Summary

The literature review has illustrated the ways in which disciplines are shaped by their political contexts, by their claims to scientific status, and their capacity to police boundaries and play the game of claims to research excellence. The review also shows how HCI has engaged with the rules of the game, and draws attention to the restrictions that these rules place on innovative and interdisciplinary work. Furthermore, through discussion of powerful ideas such as situated knowledge and concepts of materiality, along with strong conceptualisations of reflexivity, I consolidate my critique of current practice, and seek to set out resources for the further enquiry, resources which include my knowledge of and experience in the visual arts. The discussion of that enquiry is to be found in chapters 4-6 of this thesis where I seek to identify and address the performative qualities of research dissemination in the HCI workplace. First, however, in the next chapter, I set out my methodological choices, explaining why an ethnographic approach and practice-led research shaped my investigations.

Chapter 3: Practice-Led Research

3.1 Introduction

In this chapter I present the methodological framework that I have developed in this practice-led doctoral thesis. In selecting the appropriate methodological approaches, I was guided first by the understanding of the issue that was generated through the literature review, and discussed in the introduction. In particular I needed methodological approaches that would highlight or reveal situated knowledges, disciplinary rules, the agency of objects associated with dissemination, and the everyday experiences of researchers in HCI. That last element, the focus on everyday practices, led me to a broadly ethnographic approach to my practice-led research. I discuss this more fully below.

The second guiding principle was my concern to integrate a perspective that reflected my own positionality, within the HCI workplace in the Culture Lab¹⁴ at Newcastle University. I believed that using my own experiences, as well as observation and analysis of routine work practices, would provide original insights into taken for granted workplace behaviour and rituals around dissemination in the discipline. As discussed in chapter 1, this doctoral study was informed and motivated by my freelance experience as a videographer in Newcastle and specifically my collaborations with academics in the HCI research group. Therefore, my experience of being a videographer is an integral part of this research and positions me as a practitioner-an identity that I seek to maintain-while also recognising and working with my positioning as a researcher doing research on my workplace.

Those two principles are brought together through a commitment to reflexivity. This commitment links to the theoretical concepts discussed previously (in chapter 2), especially feminist critiques of positivist science, and their stress on the social construction of knowledge and knowledge practices, especially where they reveal power relations. Reflexive research practices require attention to the negotiated, contradictory and constructed nature of research, and requires that the researcher situates herself within the research process. This is not a straightforward process, indeed Finlay describes it as ‘negotiating a swamp’

¹⁴ Culture Lab is an interdisciplinary research facility at Newcastle University, Newcastle upon Tyne, UK - https://en.wikipedia.org/wiki/Culture_Lab

(Finlay, 2002). She also identifies the strengths of conceptualisations of reflexivity that locate researchers as participants in their own research, attempting to build collective or co-operative enquiry through sharing reflections and experience, in order to focus more on how the research is co-constituted and socially situated.

I thus present the methodological chapter of this thesis in two main sections. In the first, section 3.2, I start by explaining the need for an interdisciplinary approach, in order to fully meet the requirements I have set myself in exploring situated knowledges. I then discuss my personal experience and background as a practitioner in theatre and visual arts. I do so in order to demonstrate how I continued to draw from that experience to develop creative practice as an element of the research design of the thesis, and to support the artistic judgements and decisions enacted in the case studies. In doing this, and in devising and reporting on the case studies, I am also making an argument for incorporating creative practice as part of an interdisciplinary approach to ethnographic research in HCI.

In section 3.3, I link my positioning as a practice-based researcher and videographer to the conceptual and theoretical resources around ethnographic methodologies that inform my research. I begin by briefly describing how interdisciplinarity was performed in Culture Lab, and the spaces and organisation in which the work was done. I discuss a spectrum of ethnographic participation that is available within and beyond HCI research, particularly in anthropology and art, and discuss how new formats for (or relating to) ethnographic approaches are emerging in HCI.

Finally, section 3.4 provides an overview of how I conceived, organised and conducted three significant case studies drawing from my research into ethnographic practices. I suggest three modalities of 'doing' ethnography that call for different theoretical positionings in the analysis of ethnographic data. This in turn provides an enriched and nuanced approach to generate different textualities of ethnographic insights and responses. I explain the practicalities of gaining access and the ad-hoc nature of access to observation and data collection in an organisation. Finally, I present a timeline of when each of the case studies took place.

3.2 Encountering Interdisciplinarity

A desire to work with the concept of interdisciplinary research is a key motivation for thesis and my understanding of what interdisciplinary research is not only shaped the practice-led research framework but also broadened the lens through which I undertook enquiry into my own workplace. In order to navigate between the principles applied in creative practice and the application of ethnographic principles in research I relied on the adoption of an interdisciplinary framework. The literature review reveals my adoption of concepts and approaches from across a range of disciplines, and in applying these ideas I also wanted to retain a sense of openness to developments, and to constantly problematise my own approaches to understanding dissemination as a practice at the workplace. In doing this, I was aware of some risks, but was encouraged by Rendell's observation that new, if uncertain forms of knowledge could emerge:

'...the transformational experience of interdisciplinary work produces a potentially destabilizing engagement with dominant power structures allowing the emergence of new and often uncertain forms of knowledge' (Rendell, 2007, p. 60)

Interdisciplinarity is present in policy rhetoric, and has changed University priorities in research and teaching. There are multiple definitions of interdisciplinarity, and activities associated with it are diverse. Research that focuses on a problem and attempts to solve it by bringing cognitively divergent disciplines together seems to be increasing, and also seems to achieve a greater impact (Molas-Gallart *et al.*, 2014). However, these varied definitions do not provide a sense of what it means to *be* interdisciplinary. Here I try to achieve this through an account of my background experience in learning from scientific and artistic disciplines, from which I established myself as a freelance videographer. I then describe how interdisciplinarity was enacted in the academic institution that I studied and worked in, and where I was encouraged to navigate between the curious methods of artistic work, and social science's organised curiosities.

3.2.1 *Becoming a Practitioner*

I came to the UK from Taiwan as an English language student in 2002 and completed my first degree at St Andrews University in 2007. As a Biology student I spent more time in the student radio station, to which I contributed as a DJ, than in the laboratory. It was through engaging in student-led, collaborative and creative undertakings such as the radio station that I became aware of how much I enjoyed this kind of production activity. Accordingly,

after the degree I went back to Taiwan for a year. I spent this 'gap year' in Taipei where I found a job as a director's assistant in an experimental theatre group¹⁵, which allowed me to develop the productive activities that I had become interested in and laid the foundation for my creative practice as detailed later in this thesis. At the theatre group I completed a three-month performance workshop, a course which I was able to attend without charge as part of my director's assistant role. This extremely valuable work experience helped develop my passion for creative practice that I discovered earlier in the student radio station in St Andrews. The theatre work also introduced me to a network of performance and visual arts practitioners in Taipei, and I actively pursued any opportunities to work with them as an assistant on productions. Through these experiences I learned basic skills in stage and media production, such as sound mixing, lighting and video editing. I also gained an appreciation of the varied creative practices of these artists and performers, who were operating in a non-academic context. The role of director's assistant allowed me to be a participant in their productions, but it also gave me the responsibility of maintaining a critical distance from them. I enjoyed observing how decisions in the productions are made, while also taking a direct role in these processes. This dual engagement resurfaces in my role as researcher in the workplace.

3.2.2 Creative Research

In 2009, I returned to the UK and enrolled onto the Digital Media Masters course at the Culture Lab at Newcastle University. At the time Culture Lab was a new and arguably unusual research environment in British higher education. It was housed in an independent building close to the city centre, and hosted public events, while its staff and students were able to access these secure facilities at any time. In this new and exciting workplace, both academics and the students studying the programmes it offered were from a wide-range of backgrounds and disciplines. The training and tuition on the Masters of Research (MRes) was practice-led, and students were encouraged to work independently to create an interactive media project for their final exhibition.

Through this course I developed a video art practice and created a series of interactive video installations which explored the theme of 'repetition' in Samuel Beckett's¹⁶ theatre. I drew

¹⁵ Wikipedia entry to the experimental theatre group - <https://zh.wikipedia.org/wiki/外表坊時驗團>

¹⁶ Beckett

inspiration for my project from Beckett's interest in the mundane, and from dance such as 'Café Muller' by Pina Bausch¹⁷, performed by the dance Wuppertal company, and 'Oculus' by Wu Kuo-chu, a Taiwanese choreographer, performed by Cloud Gate 2¹⁸. These are critical dance performances that play out in everyday gestures. The stage design (which was shown on a video recording) was for Beckett's monologue 'Not I'¹⁹. It demonstrates how a minimalist production of a performance is capable of expressing in-depth criticality, and revealed how a stripping-back of excess elements is necessary in order to find critical meaning and clarity through these minimalist, repetitive and painstakingly constructed works.

My tutors were artist-researchers, and on the programme I gained access to a further network of local artists and practitioners in North-East England. This network of practitioners was available because Culture Lab was an interdisciplinary research institution as well as a public arts and culture venue. This unique position prompted me to initiate an experimental radio station in Culture Lab, drawing from experience of my role in the student radio at St. Andrews, and I worked as a voluntary manager at Culture Lab Radio between 2011-2014. While working at the radio station, I experimented with novel forms of broadcasting and developed approaches that allowed me to consider the work I was doing as a manager as a 'project' as well as an interest. I invited colleagues from the Lab, as well as from my expanding network of local practitioners, to join me for programmes, and in this way helped Culture Lab to engage with the local music scene while broadening my own knowledge. I also gained experience in doing the research and development for a performance of 'Alice in Bed' by Susan Sontag (Sontag, 1993), with the Newcastle-based theatre company 'Tender Buttons'²⁰, whose director was Tess Denman-Cleaver. I also gained experience in documenting workshops, through a performance philosophy conference, and through the design of an interactive video installation that was exhibited at Northern Stage, a theatre venue in the city centre of Newcastle Upon Tyne. Thus my experience on the MRes in Digital Media at Culture Lab helped me establish myself as a freelance videographer and photographer. The network of creative practitioners that I encountered there continued to support my interests in the arts, but perhaps more significantly it also allowed me to see the

¹⁷ 'Café Muller' by Pina Bausch - https://en.wikipedia.org/wiki/Caf%C3%A9_M%C3%BCller

¹⁸ 'Oculus' by Cloud gate 2 - <https://criticaldance.org/cloud-gate-2-spring-riot-2014-oculus/>

¹⁹ 'Not I' by Samuel Beckett - http://www.ubu.com/film/beckett_not.html

²⁰ Tender Buttons - <http://www.tenderbuttons.co.uk/about/>

value of creative research, or artistic research, and to see myself as a creative researcher in this context.

As Paul Carter explains:

[...] 'creative research' ought to be a tautology, in the present cultural climate it is in fact an oxymoron. A research paradigm prevails in which knowledge and creativity are conceived as mutually exclusive. In the universities this paradigm is said to be derived from scientific method... Interpretative sciences (traditionally the humanities), and even applied disciplines, architecture and design, find they can describe what they do only on condition that they leave out invention. Because of 'the lack of credibility given to the vital processes of design and creativity... scholarship and research in the fields, where it does occur, is "about" them, rather than "of" them' (Carter, 2004, p. 8)

This argument connects to my earlier discussion of situated knowledges and the history of disciplines in chapter two. Carter makes the point that creative research is often seen as oppositional to or incompatible with more traditional research methods, but, as the earlier discussion indicated, this is largely due to the concerns of the more established disciplines about the role of artistic processes and how they can contribute to a wider body of knowledge. There may also be concerns that such activities are difficult to standardise or quantify, and so may 'dilute' excellence in competitive assessments such as the Research Excellence Framework. Carter suggests artists are encouraged to explain and describe creativity to fit academic models of publication and dissemination, and in this act they may negate the social, productive capacity of art and its production. My experience in Culture Lab exposed me to a group of creative researchers who were able to develop forms of communication and artistic practice that had value and integrity as research in itself, and this motivated me to produce practice-led research through productive artistic processes and engagements.

A further important issue in relation to the methods used in the case studies in this thesis, is that in developing the visual methods described above, I was able to devise ways of using creative research to visually interrogate artefacts produced by researchers without relying heavily on visual methodologies or visual analysis. This is important in addressing the limitations imposed by HCI guidelines for ethnographic research, which often assumes that the outcomes of analysis based on ethnography needs to be written up as scholarly text (when the research is discursive); or in the case of design-led projects, as technological

prototypes. I return to this debate about different ethnographic reporting below in section 3.3.3 – 3.3.5.

3.2.3 Human-Computer Interaction

As stated above, I was a student and freelancer in Culture Lab before officially joining the computing science/HCI cohort. The research group is dynamic, with regular changes in personnel. Because I was already based in the same building and worked with different cohorts, I could act as a witness to these changes. This became a conscious research strategy, as using the workplace as the site of enquiry developed as an idea through my freelance videography practice. In many ways, the workplace of Culture lab, and the HCI group within it, presented an ideal location, as it attempted to make interdisciplinary thinking concrete, and the debates about how to do this were part of my everyday experience. Yet as well as an opportunity, this site presented challenges. Its newness, and lack of clear definition, created difficulties for the adoption of an ethnographic approach, and ethnography was the methodology that seemed able to integrate the various concepts with which I wanted to work. How can an ethnographer study a place that may not necessarily know what it is? Some resources were available to me through artefacts such as manifesto and mission statements, which present an apparently objective account of the research group, aimed at presenting a coherent reading for external visitors so that they may identify, the group, and locate its whereabouts within the vast networks of academic units in a major university.

The official Open Lab logo states that it is formerly ‘Digital Interaction at Culture Lab’ and the official mission statement reads:

‘Open Lab is a human-computer interaction, social and ubiquitous computing research group in the School of Computing at Newcastle University. The academics, post-doctoral researchers and PhD students who make up the group come from a wide range of academic disciplines, including computer science, electrical engineering, fine arts, psychology, sociology, education, clinical sciences and design. We have a particular expertise in the configuration and conduct of cross-disciplinary research and application of digital technologies to real-world problems ranging from health and social care, to the creative industries, education, and local democracy. At the heart of all our research, though, is a commitment to the experience-centred and participatory

*design of digital technologies that enhance rather than diminish our experience of the world.'*²¹

These public accounts, however, do not reflect the experiences and perceptions of interdisciplinary life in a new organisation. For example, it seemed from my observations that the spatial organisation of Open lab was a significant factor in the development of its working practices. Open Lab was a rather unconventional research cohort in the sense that the group had an office that was independent from the other cohorts in the department of Computing Science. This gave it a separate, bounded character and status. Although it operated as a group under the umbrella of Digital Interaction, the group of approximately 60 people, mainly shared the same large open plan office of about 300 square metres. Again, this produced a sense of separateness and allowed a local culture to develop, including improvised routines that offered instances and situations in which I was able to use creative license to investigate dissemination visually.

Yet this feeling of a separate culture was also at least partly undermined by the complex make-up of the physical building and the diversity of people, along with the extent of change among personnel. This, perhaps, meant that it lacked clearly defined or demarcated categories of research activities, or clear dividing lines between categories of work. Research dissemination practice take place in between things, and situations. Yet it is not spontaneous, and requires rules, so although it may be a nuanced and transient activity, dissemination, like most research work, usually finds it necessary to adopt hierarchies and produce and implement rules.

The degree of uncertainty that it identified in the research group may also reflect some borderless and uncertainty about the nature of HCI. That would reflect the debates in the HCI literature about what HCI is, about whether or not HCI is a science, and about what kinds of knowledge HCI produces. In summary, then, there were opportunities and problems presented by the location of HCI-its literal location in the building, and its wider location in the academy. In order to reduce the complexities of this situation to a manageable scale, I focused in the case studies on regular workplace routines, especially the fixed, pre-existing conditions of attendance at the annual SIGCHI conference. This established a year-long cycle

²¹ Open Lab, Newcastle University - <https://openlab.ncl.ac.uk/about/>

events, which may have varied from year to year, as did the personnel involved in the organisation, but in which I was able to participate on an ad-hoc basis.

3.3 Ethnography and Reflexivity

Ethnographic methods are an obvious choice for the study of workplace cultures: ethnography understands that cultural practices, routines and beliefs are very important in shaping the social world, including the world of work, as they try to capture what people do and think in relationship to the environment in which they live, move and work. Ethnography thus uncovers the routines of daily life, which are often unobserved or unexamined, and pays attention to how people themselves understand and give accounts of their situations (Hammersley, 1999). Ethnography is, of course, a very large field, containing many different approaches: in its simplest expression it is rooted in first-hand experience and in interpreting the points of view of those being studied (Atkinson *et al.*, 2001). There are debates about the extent to which ethnography should have a relationship with theory, as some ethnographers argue for the primacy of the data and suggest that over-theorised accounts of research get in the way of immersion in accounts of lived experience.

A key principle of ethnography is that the researcher engages directly with the organisation or institution that is the subject of study through becoming part of it. In my case, that principle was already met through my membership of the research group. I was also committed to using a range of methods of data collection, including methods that derived from my creative practice experience, in order to achieve as rich and detailed an account of dissemination practices as possible. I was also adopting the ethnographic principle of participant observation in my study, and through a commitment to reflexivity I was aware of my insider/outsider status as both a doctoral researcher and a member of the group. In this sense I was 'living in the borderlands'. Indeed, the main challenge in approaching dissemination practice as an ethnographer at Open Lab was to learn to be an HCI researcher while also reflecting on HCI's epistemic practice. That concern to work reflexively was supported by the theoretical positioning discussed in chapter 2, especially in relation to situated knowledge (section 2.3.1), while reflexivity was also of practical and methodological concern in terms of how I addressed issues and responded to what I observed. I draw from the body of work prevalent in HCI literature (Law, 1991; Luff *et al.*, 2000; Suchman, 2000;

Suchman, 2007), these sociologically-informed studies of work and workplace technologies offered support in developing a deeper understanding in-situ.

While there are many ethnographic accounts of workplace cultures (see (Hodson, 2004) for a meta-analysis) these often focus on industrial organisations, on tensions between management and workforce, on acts of resistance to exploitative work relations, and on gendered and other forms of discrimination at work. Ethnographies of academic work are scarce (see (Lamont, 2009; Ahmed, 2012; Krautwurst, 2013; Jubas and Seidel, 2016) for examples), and in attempting an ethnographic study of my workplace I drew from the body of research based on ethnography in HCI and ethnomethodological guidelines for terms of participation in an organisation/workplace. A further aspect was that as a videographer, I was accustomed to observation, and I was able to use that expertise to locate myself within the workplace as simultaneously a student and a participant in the research group. Together these resources provided the necessary framework of enquiry for the thesis and provided a focus for the observations. However, the key suggestions from the HCI literature are mainly aimed at researchers or designers who wish to design prototypes or technological interventions with potential users in domestic or professional settings (Oulasvirta and Hornbæk, 2016). My questions were rather different, so that I looked to observation, interviews and discussion in order to explore the different ways in my research where the production of dissemination artefacts could be seen and explored, and through which I could also develop a critique of dissemination practice? In the next section, and in pursuit of reflexivity, I discuss some of the issues raised by my observation of my own workplace.

3.3.1 *Participant-observation*

Once, in a casual conversation, a fellow PhD student with whom I shared the same office asked me what I was working on. As I explained my plan for the research and also talked about the fact that the fieldwork element of the study was not to take place 'out there' in the field but was mainly taking place where we were, he seemed concerned and suggested that I should also be 'out there' travelling up and down the country interviewing other academics in different universities. According to him, if I did not do that, I would run the risk of 'just' doing a PhD from my desk. This comment sparked many points of relevance to the discussions in this thesis, and especially in this section. In the first place, and with reference to my interest in artefacts and the everyday routines of work, by the time I started writing

up the thesis I had been assigned a total of four desks, so that the image of desk-based research as stable and confined was rather misleading, in this case. The fieldwork I conducted took place, therefore, in a number of different settings, and was focused around these desks at various locations on campus throughout the doctoral study. The student's concern also raised issues that may be related to how we perceive the everyday, which underlines the importance that ethnographers place on 'making the familiar strange'. Why did this student think that my desk was not a place 'out there'? The assumption I make is that the everyday artefacts and routines of research work were invisible to him; they were not objects of enquiry. There is further interest in the concern he expressed that a 'desk-based' study would risk being sanctioned by academics in HCI. A desk, to quote Ahmed, is also where many philosophical writings started, and a presence that acts as an orientating device for research practices:

'After all, it is not surprising that philosophy is full of tables. Tables are, after all, "what" philosophy is written upon: they are in front of the philosopher, we imagine, as a horizontal surface "intended" for writing.' (Ahmed, 2006, p. 3).

My point here is that the adoption of ethnographic principles as a participant-observer is not a neutral position. Ethnographers are not simply finding out and documenting what other people think or say (Atkinson *et al.*, 2001; Dourish, 2014). The ways in which I see and select information and my understanding of what appears to be interesting or important is influenced by the theoretical sources I draw from to conduct ethnography, so that, as illustrated above, the desk is an important artefact in my study, and mundane activity is worthy of study.

The mundane is also debated between different domains of HCI, that are operating under the influence of different research agendas (Lindley *et al.*, 2011; Si\ *et al.*, 2011; McKinnon, 2016). What is defined as mundane represents a difference in perception of what counts that needs to be negotiated between two people, with two very different backgrounds. It was my obligation, from within my perspective, to attend to mundane things such as my desks, whereas the other student, working within his paradigm, was more concerned with representative sample size in data collection. However, our different conceptualisations need not obstruct my participation in the everyday observation of a shared workplace. It is precisely how we experience the mundane that leads to discovery of unique properties in

situations and artefacts (Livingston, 2006). In fact, I later collaborated with this student and we received a small grant for a postgraduate student research project. The grant enabled us to travel by train on several research trips 'out there' up and down the country and we conducted interviews with participants together, an experience which I thoroughly enjoyed.

Differences in perception, then, are not necessarily problems for the ethnographic researcher, but instead illustrate the fluidity and changeability of cultures, and the importance of recognising differences in perception. These can become the focus of discussion and debate within the workplace. Throughout the PhD I participated in a variety of research-related activities, whose complexity and importance were perceived very differently by different members of the same research group. The challenge for an insider participant-observer is to build rapport with other participants in the same social setting, but not become overly deterministic about why they think what they think.

The issue of rapport also extends to reflexivity in ethnographic participation:

'Self-consciousness and self-awareness become important tools of the job, and at the same time we are forced to confront the question of whether the people whom we have already stopped calling "subjects" and started calling "participants" might better be labelled "collaborators"' (Dourish, 2014, p. 10)

I highlight the exchange with the PhD student as an example of the rich dynamic we may find ourselves in when building rapport with people around us, so that when one's own academic colleagues become research participants they also become collaborators, not only on research projects, but in the sense that they are working with you to help you understand your differences in approach, and ways of seeing research.

3.3.2 Ethnomethodology and workplace studies

If ethnography is the observation of people and the recording of their experiences and understandings, in specific contexts, then ethnomethodology addresses the complex issue of how those experiences are made observable and understandable. Once again, there are debates about how an event or experience may be understood, about the degree of interpretation a researcher should make, and about the power relations present in interpreting the lives of others. Typically, an ethnomethodologist might make an observation of the same events and document or record them with the same techniques as their

subjects, in an attempt to get the best possible account of them. Here too, the importance of seeing mundane events and practices differently is key:

'...ethnomethodology begins by adopting an attitude of reflection upon that which is observably the case. Instead of simply taking familiar scenes and activities for granted, the ethnomethodologist poses the question: how are such scenes and activities being produced? The fact that one can see what is being done provides the basis for the question: how is it being done?' (Francis and Hester, 2004, p. 177)

This capacity to see the mundane differently highlights a focus on how an activity is being performed. Looking at the performance of an event has given rise to new forms of data collection in HCI and it is often associated with literature found in the domain of Computer-supported-cooperative-work (Crabtree and Rodden, 2004). Therefore, the application of ethnomethodology in social and domestic settings is widely recognised in the HCI literature, however there are only a handful of projects explicitly designed for the understanding of HCI workplace-related settings (Elish, 2011; Vines *et al.*, 2013). As indicated earlier, this is part of a general situation, in that academic workplaces are not much studied by academics. Accordingly, while there are many HCI labs in the world, they are typically dedicated to understanding the actions of 'others'.

However, there are some relevant developments in the relationship between ethnomethodologists and the wider field of computer science. For many, the 70s marked the beginning of social science input in system engineering and design. Some of the most seminal hybrid projects were implemented at Xerox Parc. This body of work helped to create a bridge between ethnography and design. Through various analytical frameworks, designers, scientists, and indeed ethnomethodologists found ways of using ethnographic data to inform systems design (Luff *et al.*, 2000). However as Suchman noted, the techniques that researchers adopted to represent people at work could also impact on how we interpret and understand the research data (Suchman, 1995). Although the approaches to data gathering and reporting suggested by ethnomethodology have been tried and tested in HCI researchers, as a methodology its potential remains somewhat neglected in HCI for understanding the discipline itself. The phenomena that ethnomethodologists look at are not always immediately available to be utilised by system designers because of their perceived ordinariness. In a proposal to further establish the relations between ethnographic data and design, Dourish suggests an approach which he terms

'technomethodology' (Dourish and Button, 1998). In this approach he proposes that, rather than taking an ethnographic account directly as having implications for design, the adoption of a theoretical orientation as the design practice and vice-versa should be considered. This mutual exchange between theory and design implies that, instead of asking what the observed social phenomena prescribes for technology, the occasion of ethnographic observation could be used as generating questions about the nature of technological systems.

In essence, I am proposing a similar exercise with regard to research dissemination, by asking what phenomena can be identified locally that illustrate dissemination in action. Thus, I set out to explore a workspace that hosts and supports academic researchers who regularly produce and disseminate HCI research. Although HCI as a global community has created a rich repertoire of methods to understand and interpret knowledge it generates about machines and human users, there is very little work which attempts to document how such HCI knowledge is materially represented and produced. That is, the user-experience of HCI researchers as designers/users of HCI knowledge hosted by the academic industry is not very well-studied. Yet many HCI practitioners would no doubt recognise the ill-informed design of many digital libraries that we frequent to download journal articles. The only place any discussions about this irony seems to be on social media platforms, where many of my contacts frequently lament over bad HCI service for HCI researchers. Indeed, such knowledge is often pushed to the side of a research project as a technical problem or seen as a matter-of-fact and requires no further attention. However, it is precisely such a technicality that often demands critical reflection. As the example of my interaction with my fellow PhD student suggests, problematising the way researchers disengage ourselves from the context of our research is especially salient for HCI researchers who wish to contribute towards design thinking that better establishes techniques for understanding and representing knowledge.

3.3.3 *Ethnographic Fictions*

Here I review recent developments in disciplines where ethnographic research is reported outside the conventions of journals, conference proceedings and other academic, textual accounts. In these examples, ethnography moves from a typically data-centric practice to more experimental modes. Concerns around ethnography practices are expressed in many

disciplines in the humanities and social sciences as the use of ethnographic methods is widespread and varied. A prominent concern is with the way knowledge is produced through ethnography – in particular if it is extracted from research ‘subjects’ rather than, or instead of, co-produced in collaboration with them. A related issue concerns the obligations of the ethnographic researcher when their work reveals the uses and abuses of the power structures, at work in the environments that they are researching, including those that reflect or establish hierarchies through the accounts that they are producing, and so implicate them in the very processes that they may be seeking to uncover and challenge (Atkinson et al 2002). Scholarly writing (indeed such as this thesis) is the standard for an academic ethnographer to consolidate and report her work, and scholarly writing often frowns upon or excludes any identification with, or sympathy for, the people being researched, which is seen to cloud objective analysis. There is a tension, then, between understanding a work culture and identifying with it.

Anthropologists have long been concerned with the nature of ethnographic writing and have developed experimental and ambitious methodologies in response to these concerns. Clifford & Marcus’ seminal book (Clifford and Marcus, 1986) on ethnographic writing was an important anthology of reflections on the status of ethnographic research and writing:

‘Even the best ethnographic texts – serious, true fictions – are systems, or economies, of truth. Power and history work through them, in ways their authors cannot fully control’ (Clifford and Marcus, 1986, p. 7)

Clifford’s suggestion above highlights that fact that ethnographic practice need not view the debate on power, and of the author’s ideological assertion on their writing as a limitation, but rather that the practice of ethnographic writing is freed from the pseudo-pursuit of a holistic objectivity. Instead he emphasises a ‘rigorous partiality’ – that is to say, to take account of the partiality of one’s ethnographic position and work rigorously within this framework (Clifford and Marcus, 1986). The way we interpret ethnographic text is also open to debates around the process of writing through this framework. Our position as reader of ethnographic accounts which do not claim an impartial approach becomes a subject of scrutiny, and reading these accounts demands more attention to our own positioning.

‘Writing culture’ launched an ongoing forum for the last 30 years in anthropology and related fields in human science (Marcus, 2012). Since these developments, ethnography has

been taken beyond a practice that promotes realism, or the establishing of truths around the behaviour and practices of others, into a practice which has informed and been informed by the speculative, ontological turns in anthropology and philosophy (Vigh and Sausdal, 2014). Ethnography has thus developed into a practice of serious fictions. This ‘fictional’ approach becomes a significant aspect of my methodology, as I develop my ethnographic positioning, and is particularly influential to the studies I describe in chapter 6.

3.3.4 *The Artist as Ethnographer*

Art practice and ethnography are also closely linked and have taken advantage of the reflexive practices inherent to ethnography. Hal Foster coined the notion of the artist as ethnographer as a new paradigm of art practice (Foster, 1996) and suggested that ‘...only recently have postcolonial artists and critics pushed practice and theory from binary structures of otherness to relational modes of difference.’ (Foster, 1996, p. 178). This ethnographic turn in the arts has been extremely influential on contemporary art practices, and criticism of these practices. The subject of art is now generally considered to be relational, rather than a distant other; the audience’s participation in the artwork is mediated by this relational approach, and the processes and groups that produce artwork are made visible and become part of the experience of viewing—or taking part in—artwork.

However, art scholarship has been slow to uptake methodologies and research practices that complement this shift in positioning, and accommodate wider social practices that surround the production of artwork, as Siegenthaler observes:

‘ The ethnographic turn today, I contend, has its basis neither in practices of radical Othering nor in its merely discursive critique and, most importantly, has effectively left behind the representational museum space. In its place, the actual quality of field research (proximity and direct experience that cannot be objectified but only experienced subjectively in an ‘embodied’ manner) has become an essential aspect not only of social anthropology, but also of contemporary art practices.’
(*Siegenthaler, 2013, p. 742*)

Siegenthaler’s critique comes from a position of relational aesthetics, an art practice that elevates and pays close attention to human relations and social context, in which the artist plays a role as a catalytic presence in the generation of embodied situations. This practice was defined by the art critic Nicolas Bourriaud (*Bourriaud et al., 2002*) in the late 1990s,

although social relations and experimentation by artists around artists has been a staple of art practices such as installation art for a much longer time. Claire Bishop discusses Dan Graham's minimalist installations as examples of artworks that draw attention to the experience of viewing and experiencing art as a social activity, where the relationships between people in the space are formed through the presence of the artwork:

For Graham, the experience of being among other people forms a strong counter to the 'loss of self' that we experience in traditional works of art, specifically painting, which encourage us to escape from reality by identifying with the scene or objects represented. (Bishop, 2005, p. 73)

Siegenthaler however moves beyond a discussion of what the artwork does in and of itself, to the relationship of writing—in the form of art criticism or academic scholarship—to artworks and the social events they engender. This position is extremely valuable to my methodology, as it is the complex relationship of dissemination to embodied experience that I am attempting to unpack.

Pink discusses writing as capable of capturing sensorial experience. She goes on to suggest that art practices have been adopted by academics in order to integrate the different textualities of ethnographic dissemination:

'Relationships and appropriations between scholarly research, arts practices and applied interventions will depend on the aims and frames of each unique project. They will also be contingent on the skills of individual researchers and types of collaboration they enter into' (Pink, 2009, p. 133)

Accounting for the relationship of art practices to writing is an aim of my ethnographic approach. I consider, as an artist, that ethnography produces a response, that is itself observable and experienced. It is not a neutral, passive observation but a methodology that is informed by relationships between research projects, artistic practices and the individuals and institutions that frame them. My reflexive methodology is a developing, relational practice of collaboration and embedded activity in the workplace. A challenge my approach faces is in the nature of its dissemination, as for example through the accounts in this thesis. But through problematising dissemination, my methodology aims to problematise the relationship of a text to a wider practice, as it is one component of a relational set of events.

3.3.5 New Approaches to Ethnography in HCI

HCI, as I mentioned, is rather unfamiliar with the ethnographic practices I describe here. In section 2.3.5 I suggest that arts practice in HCI is also treated as an undercurrent theoretically. The expression of art practices are, however, rather pervasive in HCI research. There have been influential ideas from these practices appearing in various forms, benefiting from the broad acceptance of new and varied media in the dissemination of research in HCI, as I describe in section 2.3.5. I focus here on areas that are motivated by reflexive principles of qualitative research, such as participatory design, feminist HCI and research-through-design, where researchers have tried to accommodate radical conceptualisations of knowledge forms to better communicate research findings and discuss how these have influenced my practice-led methodology.

Design Fictions (Sterling, 2009) have emerged as a strong new contender as an alternative dissemination practice in HCI, focussing on narratives and other accounts of projects depicted in imaginary futures as a means to stimulate conversation and debate among researchers. Blythe (Blythe, 2017) has developed this approach in HCI into a proposal of 'research fictions' as way of discussing writing and narrative conventions emerging in HCI literature. In chapter 6, I describe my own 'research fictions' (section 6.4) although the naming here is coincidental. What is interesting in that Blythe and Sterling's 'fictions', fiction is standing for a narrative or novel-like form. It is not concerned with the ethnographic fictionality put forward by Clifford, in which we can understand fiction more generally as written accounts of observing others. In the former, fiction makes itself clear and obvious as a mode of dissemination, in order to stimulate discussion. In the latter, fiction informs a position that researchers must be conscious of, and through this awareness a certain amount of freedom is found in the ethnographic approach.

Formats traditionally associated with arts practice have also informed approaches to ethnography in feminist HCI. As example, the newly fashionable 'zines' that are published as an account of ethnographic studies with participants, such as the feminist zines workshops on 'hackerspaces' that Sarah Fox has produced. Fox states:

After publishing this academic paper in 2015... we recirculated the work as a zine—a self-published magazine typically made with a photocopier. The zine knit together content from our published paper with local histories of feminist print production. Here

we use this case to illustrate the opportunities and limitations of alternative modes of research distribution. (Fox and Rosner, 2016, p. 68)

A difficulty here is that the discussion supposes the zine is an 'alternative mode of research distribution' but the zine is produced from an already-developed paper. Further, an additional paper reflects on the zine and its role; its successes and limitations. The zine does not operate here as an alternative mode so much as an edited mode, and is arguably weakened by its origins as academic paper – it is restricted by its disciplinarity as I discuss in section 2.2.6 – and so cannot truly embrace or represent the 'artistic zine' as an ethnographic medium.

Pictorials (Jarvis *et al.*, 2012; Blevins, 2016) foreground the objects and designs found in HCI research and the situations of making these artefacts. As photo-essays, they lean towards a documentary approach. This creates a sense of the storytelling of ethnographic events that are relayed through the artefacts being studied, and have become more widespread as a submission format since their inception as part of the DIS conference. There are also theatre/show styles of presentation at conferences such as CHI but these tend to be less subject-specific, and instead aimed at describing the production of the knowledges they present. In this way, they reflect ethnographic practices. However, as I discuss in section 2.3.5, these new approaches are rather limited as they become sited as subdomains of HCI research, rather than fully accounting for the implications of the formats and media they utilise. As materials predestined for dissemination, they are unable to articulate aspects of their practice. As such, while they have been influential for my approach, I find many of these emerging forms in HCI unsuitable to the nature of the practice-led ethnographic methodology I am developing.

To some degree these alternative concepts of ethnography discussed above reflect the nature of ethnographic research, in that it is practice-led. Since that ethnography recognises, as a key principle that it involves actions, processes and practices that are part of the social world being studied and have effects and implications in it. The motivations for an ethnographer doing ethnography are not dissimilar to artists practicing feminist performance art or socially-engaged art, in that both ethnographers and artists are interested in confronting complex issues in our societies through 'being somewhere' that their practice leads them to. By drawing comparisons between experimental ethnography in

a social scientific context and ethnography in the arts, I am suggesting that these two bodies of work do not necessarily need to be considered as distinct disciplines. Rather, it is the 'expected outcome' of ethnography and art that often distinguishes these two similar bodies of work. The process and outcome of a piece of ethnographic research are more likely to be presented in writing and submitted to academic venues instead of art venues, and vice versa. In chapter 6 I attempt to problematise this splitting of expected outcomes by considering a conference paper submission performatively.

3.4 Structuring the Case Studies

In assuming a feminist positioning in the critique of a local HCI workplace, I draw from feminist HCI for the rhetorical devices needed to situate myself. Such feminist positioning allows me to think laterally whilst learning about and following routines. A feminist positioning also enables reflecting on data collection, reflexively. The combined methodology for approaching the subject of dissemination practice at the workplace requires negotiation with the site as well as disciplinary differences, and this is played out in several analytical developments in this thesis which I return to the final chapter. For the textual report of the case studies in the fieldwork chapters 4-6, I draw from guidelines of ethnomethodology (Francis and Hester, 2004), visual methodologies (Rose, 2016) and sensory ethnography (Pink, 2009) to unpick observations depending on the properties of the artefacts I studied. In organising the case studies I also draw from various sources to create embodied reflexive accounts of the insights gained through my ethnographic participation.

The fieldwork discussed in this thesis was organised as a series of ethnographic case studies which focused on different artefacts. To illustrate how participation-observation was carried out, I describe the availability of and access to the fieldwork site spatially and conceptually. The thesis accommodates a rich amount of data and stories, as the writing itself is not just academic-universal, but academically-inclined and aimed to be read and accessible across different readerships.

As a student my physical access to the institution was granted. I maintained activity in freelancing in order to receive video commissions from academic colleagues, both within my institution and across the wider institution of the university, and this allowed me to gain access to the dissemination activities of other members without being overly intrusive,

explore workplaces across the campus, and offered opportunities to engage in conversations about visuality in HCI research with colleagues in the process of these actions.

When the fieldwork involved data collection, I mainly used a digital audio recorder (ZOOM H1 field recorder), a personal research diary, and a digital camera for still photography and video (Panasonic GF2).

3.4.1 *Three Case Studies in the HCI Workplace*

Each case study includes exploratory activities that are followed by the corresponding case study. Exploratory activities are literature reviews that I conducted which helped to conceptualise the subject of enquiry for each case study. I would then discuss the feasibility of my ideas with my main supervisor, who was also a lab member, and we would develop my research questions further until they could be practically incorporated in interviews and focus groups. My main approach to data collection in chapter 4 and 5 was to use semi-structured questions to elicit response from my participants, and all interviews and focus groups are audio-recorded and transcribed by myself. For the case study in chapter 4 and 5, it was important to adopt a qualitative process for data collection because my interview questions were all aimed to provoke conversations about the CHI conference and paper submissions. These questions would indirectly touch on issues like research funding, local politics and personnel, all of which would yield sensitive information that requires confidentiality, hence the case studies were organised as qualitative research. For chapter 6, the case study was created in order to address the limitation of the data collection method in chapter 4 and 5. Therefore the research process of the final study does not involve typical data collection per se, instead the final case studies were developed through artistic collaborations with other researchers.

CHI Video

In case study 1, my objective for the fieldwork was to connect my previous freelance experience as a videographer to issues of reflexivity through interactions with colleagues at my workplace, in which we discussed video-making as part of CHI submissions.

CHI Booklet

In case study 2, I negotiated the opportunity to take part as an assistant in a booklet production documenting research produced in the workplace intended for dissemination at the CHI conference.

Research Fictions

In case study 3, I develop my creative art practice, and analytical insights gained through the previous studies, to produce an integrated, critical project in which a series of artistic artefacts that I term 'research fictions' are collaboratively developed with colleagues in the workplace.

The cases thus range from doing the ethnography of CHI video, to adopting an ethnomethodological stance to understand 'dissemination routines' through a booklet production, to finally producing a performative art-practice ethnographic response as critique. My approach to dissemination oscillated between different methodological moves. This is a characteristic of ethnographic research and should be seen as a strength. For while the ethnographic positioning may be unstable, Markham explains the importance of movement between perspectives, in the context of studying new materiality in the age of digital media:

'In many ways, what's most important is not how one moves but acknowledging that movement is inevitable, natural, and productive. It is also not necessarily forward, in that many movements will take us back to the beginning or will cause us to see the entire project in different ways, forcing us to mark our current point as a new beginning to move from.' (Markham, 2013, p. 77)

Chapter 4: CHI video

4.1 Introduction

In this chapter, I describe the first of three qualitative case studies of research dissemination. This initial fieldwork was set up to explore video-making as part of existing dissemination practices (e.g. publications and public engagement events) located within the 'Digital Interaction' group of Culture Lab²², Newcastle University. The focus of my inquiry in this chapter is to unpack the relations between a researcher and the researched via a productive critique of 'research videos'. The fieldwork was carried out between 2013-2014 in three parts: visual provocations, focus groups and a postcard survey. Alongside literature and video reviews, the fieldwork in this chapter reflects my positioning as a videographer, PhD student and ethnographer within a HCI workplace. By presenting the fieldwork I also negotiate the assumptions around these three different roles I adopt to interrogate the performative qualities of dissemination practice from within the workplace.

The study described in this chapter was initially conceived as the starting point to develop a video prototype that would allow HCI researchers to publish their findings as multi-media documents. My initial motivation was to use a familiar framework of prototype design to engage my colleagues, who would contribute ideas about the prototype, as well as provide insights to the existing practice of academic publishing. However although I continued to pursue video prototyping alongside the workplace study, there was no funding nor technical support available that I could access to develop my ideas further. Therefore I resorted to using video prototyping as a speculative and performative element to inform the sociological questioning about the workplace. Discussions with my colleagues about how one might go about creating video prototypes for academic papers helped to continually unpack existing CHI paper writing practice within the lab.

There are many ways to approach the study of videos as dissemination material from institutional perspectives. These approaches often pertain to matters of research excellence and impact in the public-funded context. report compiled by the Research Information

²² Digital Interaction was later re-named as 'Open Lab' in 2016.

Network²³ and JISC²⁴ detailed why and how academics working in the UK are sharing their knowledge. The report explained that UK researchers face difficulties in choosing different channels to communicate their work:

'...but the perception that their work is being monitored and assessed in particular ways, notably by the Research Assessment Exercise (RAE), has a major influence on how they communicate' (Fry et al., 2009, p. 4).

In these official texts and reports, video and other multimedia are seen as vehicles for communication that represent a public-facing academia, and academics working in the same disciplines are seen as a collective, rather than individuals situated in specific workplaces. My approach in this chapter is to adopt a media art perspective, drawing on my background in media art practice, and consider video as a medium of art within an academic context. To study video in HCI as a medium of art requires the adoption of changing perspectives, allowing me to switch between multiple views on the impact of video on the researcher and the researched. In doing so, I attempt disruption of the boundaries between the researcher and the researched, highlighting the ambiguous nature of HCI-practice in knowledge representation through dissemination. The idea of disruption draws from the critical discussions of performance studies and feminist STS reviewed in chapter 2, regarding situatedness.

As a freelance videographer making videos for academics, I was granted access to observe my clients' research dissemination in action. As a PhD student new to HCI as a discipline, I was learning the code of conduct and finding the context to situate my work within a research community. As an ethnographer who wished to gain access to study the everyday practice of dissemination locally in the HCI workplace, I had to "cross-over" from being an implicit observer (freelance videographer) to being a self-appointed note taker. These roles, without being necessarily contradictory, provided the opportunity for me to engage in empirical fieldwork creatively and navigate an insider and outsider perspective within the qualitative research space (a topic which I return to in chapter 7). Therefore, in this introduction I also describe my transitional work period in the workplace before officially joining the group. The perspectives I developed through negotiating different professional roles formed the basis of my analysis and critique of dissemination practices in the

²³ RIN - <http://www.rin.ac.uk>

²⁴ JISC - <https://www.jisc.ac.uk>

workplace. The fieldwork illustrated in this chapter led to the further inquiry discussed in chapter 5 and chapter 6, where I present two further studies of dissemination artefacts.

4.2 Video in HCI

What are the connections between knowledge generated from research and the media that a researcher may choose to re/present that knowledge? In this section, I describe how videos are currently understood in HCI via three overlapping categories: video analysis, dissemination videos and concept videos, before going on to suggest an alternative reading of video's relations to knowledge in HCI through art criticism.

4.2.1 History of Video-Making in HCI

The history of video-making in HCI is well documented over the past two decades (Chow, 1989; Mackay, 1995a; Elish, 2011). The literature on videos has mainly been written from the perspective of HCI practitioners working with video as qualitative data, as design tool, or as platform of communication. There are also HCI sub-domains dedicated to researching the development of video technology, as well as interaction experience with video (Kirk *et al.*, 2007). As I alluded to above in discussing my own freelance work, dissemination through videos has become common practice in academia. However, video as a medium of dissemination is rarely discussed in HCI, and the impact that this medium has on the discipline itself is even less well-understood (there are occasional discussion on the ethics of video communication of HCI research, see (Mackay, 1995b; Elish, 2011)). HCI researchers also seek to have their work acknowledged through peer-reviewed publications, they are also encouraged, or perhaps sometimes even pressured, into making impact on a wider audience through various venues such as conferences, press releases and social media (Vines *et al.*, 2013). These pressures may explain some of the growth of video in HCI, but not all of it. How did video-making become common practice in HCI?

4.2.2 Video Analysis

Perhaps the most commonly associated form of video as qualitative data in HCI has come from video analysis (Heath *et al.*, 2010). The introduction of audio and video recording technologies into fieldwork has revolutionised the activity as it enabled researchers to capture detailed interactions in a variety of physical settings, with the advantage that the recorded data can be revisited multiple times. There are also suggestions that audio and

video recordings retain a level of authenticity in their representation of the events that are captured, however this view is based on the belief that recording technologies are neutral devices (Back, 2010). The criticism point made here is not to suggest that recording devices are not neutral, but rather that the questioning of the authenticity of multimedia data highlights the representational nature and materiality of research and media. The researcher, technology and fieldwork are brought into focus within the framework of qualitative research. The HCI literature demonstrates that video analysis supports the study of work, but scholarly practice as a form of work seems to be excluded from the scope of workplace studies. How will academics utilise it to study their own work practice? In their introduction to video analysis, Heath et al raised a question for the research community as follows:

'The publication and presentation of video-based studies are constrained by the conventions and conventional media through which academic research is disseminated. Notwithstanding the recent emergence of innovative technologies for dissemination, it is likely that we will have to continue to work, at least in part, within the limitations of text-based media' (Heath et al., 2010, p. 12).

Indeed, the current guidelines for 'Video Showcase' in the ACM SIGCHI conference have responded to Heath et al.'s prediction, in that conventions still determine how research is shared, and through which media. The guidelines on video showcase in 2018 insist upon submissions that: 'should not, for example, require the viewer to read the paper to understand the genre of the work. Nor should it refer to "the paper" or "in this work:" the video is the work.²⁵' The trending use of video as stand-alone submission suggests that the research community is ready to accept non-text-based media as appropriate content regardless of the research subjects. The guidelines also state that video showcases are to highlight the diverse nature of HCI.

4.2.3 Research Dissemination as Video

From introducing video analysis and video as qualitative data, my discussion inevitably blends into notions of research dissemination through video. Authors who wish to take part in some or all aspects of video-making in HCI research would need to reflexively consider their role in knowledge production and dissemination. In the focus group study section (say where in the thesis) I return to this topic. The video guidelines mentioned in the focus group

²⁵ 'Videos must stand alone' - <https://chi2018.acm.org/authors/video-showcase/>

discussions were based on relevant materials circulating in 2013. Much has changed since then in terms of video qualities and HCI research agendas, however the question of reflexivity remains.

In addition to capturing video data and representing outcomes in video, HCI practitioners have also been producing concept videos. These are also known as vision videos, or sometimes speculative design films (although this last name also refers to a type of design fictions, depending on how faithfully the producers adhere to its dystopian origin (Sterling, 2009; Tanenbaum *et al.*, 2016). Overall, I refer to a body of work in HCI that depicts future imaginings of technology in the everyday. Videos in this genre are likely to contain 'world-building', often expressed through voice-over or captions; scenarios that suggest new work and life models. The narratives in these videos are invoked to situate existing prototypes or speculative design objects in real worlds. For example, in the CHI 2018 suggested list of concept videos, the term is used to suggest effective content that is suitable for submissions and some are listed as good examples of how to make videos in HCI.

Similar speculations are also produced by companies in the technology industry under the rubric of research and development. The 'Productivity Future Visions'²⁶ series by Microsoft is a clear example of concept videos. In this series, the speculative design scenarios are set in a near future worlds across different cultures. The technological design objects appear to have clear applications, such as communication devices, sensors, drawing tools and so on. These videos encompass human life settings such as work, healthcare, education and home. The content of these videos is part and parcel of research knowledge, they represent neither only the process or the outcomes. It is arguable that concept videos as such, especially those published by industries, are merely part of corporate digital marketing strategies to promote presence. However, they also address utopian visions of the future and create a potential audience who will adopt a visual language in extending the utopian view that technology will play a vital role in improving living quality. In assessing the concept videos released by Microsoft, Kinsley points out that this style of video contains a rhetoric around technological design: '...it is an attempt to produce forms of anticipatory knowledge in the present, for it is the 'see it to believe it' logic that rests behind their production' (Kinsley, 2010). The

²⁶ 'Productivity Future Visions' playlist - <https://www.youtube.com/playlist?list=PL2B8C6AB94E8259C6>

academic and industry players of HCI are actively engaged in researching with video, researching through video, and disseminating research through video. Thus I consider 'research videos' an emerging genre of video, where the acts of video-making take place in broad categories can only be demarcated temporarily, while in practice they are entangled in a complex network of researchers, knowledge and media. In the next section, I illustrate some of that complexity through a discussion of some of the video work that I carried out for and with the HCI research group.

4.3 Before ethnography

Prior to starting the PhD, I had completed a Masters Degree in Digital Media (MRes) and started working as a freelance videographer as well as a part-time research assistant to my previous supervisor on the masters course (as I describe in section 3.2.1). The part-time role allowed me to maintain access to the University's audio and video equipment in Culture Lab and a hot desk space in the open plan office [Fig. 1] where the HCI research group 'Digital Interaction' (Di) was based. Perhaps due to my proximity to the group, one of my first academic commissions came from a research student (Anja Thieme) also working in the same office at the time. Anja was working on her Masters' thesis and had begun developing an interactive prototype and recruiting participants for the deployment. The project required a videographer who was available to take part in the study as an assistant to support participants creating personal videos. The project was called 'Lover's Box' and my role was documented in a journal publication (Thieme *et al.*, 2011).

This video commission became my first introduction to HCI as a discipline. Through communicating with Anja and her colleagues I began learning the basic terminologies in HCI research on an ad-hoc basis. Prior to working with Anja my freelance work clients were mainly arts and culture practitioners who asked me to document live performance and events. My lack of experience in qualitative research meant that I was not aware of the difference between 'video as data' and 'video as a medium of art'. Nor did I consider my relations to the lead researcher and participants to be different from those with other clients. My focus was to produce videos that catered for the needs of both the participant and the researcher, in that the participant wished to create bespoke video content and the researcher wanted to make sure that the video files were of high quality and compatible with the prototype. This experience opened up a creative opportunity for me to work with

HCI researchers, and, having been introduced to the research group through Anja's project, I received a second commission for a similar project which also required a videographer to work with participants.



Figure 1. The open plan office inside Culture Lab, Newcastle University where the HCI research group was based. Photo: Ko-Le Chen

4.3.1 BinCam

Around the same time, I started receiving video commissions from other academics working in HCI who needed to produce dissemination materials for public-funded research projects (e.g. iLab²⁷, BinCam²⁸). These videos were intended to demonstrate the outcome of a project by re-enacting in-situ use of interactive technologies. My clients, usually the lead researchers, would prepare a document that served as guidance notes to cover the key outcomes of the research. Since there was no record of the behind-the-scenes activity that structured and shaped the filming, it is difficult to produce a clear account of the process of making these videos, and each video commission was unique in how they were put together. However in all of them, my working relations with my clients were collaborative. Apart from

²⁷ The Digital Kitchen for iLab - <https://youtu.be/bt7WYG4r99E>

²⁸ BinCam - <https://youtu.be/gWkr0lhNbbE>

operating the camera on set and editing the footage, I shared the rest of the filming decisions with the researchers. For example, we would discuss the aesthetics of the video and the schedules of shooting. One of the most recurring issues on the sets was how the different researchers all exhibited the same trained focus on visual details that I did not pick up. As a videographer, I believed that how I chose to construct a frame in the video was an intuitive decision and apart from technical requirements such as lighting, there were no strict guidelines. I was particularly intrigued by the way my clients, the academic researchers, would often spend a long time contemplating the framing of a prototype, sometimes double-checking its representation with that in the corresponding publications. The researchers, then, were working within a strong frame of disciplinary rules about how objects should be reproduced.

On one occasion, Anja, the researcher who introduced me to HCI, asked if I could make a dissemination video for a research project called 'BinCam' (Thieme *et al.*, 2012). This was a prototype that looked like an ordinary waste bin but had a built-in smart camera. One of our filming locations for this video was the open plan office we shared, where a smart kitchen was installed next to the entrance to the office. Having waited for the office to clear after hours, around 9pm on a weekday, Anja and I finally set up the shot we needed. My task was simple, I was to capture the prototype, a 'bin', in a 'kitchen'. Since we were on a University campus, where there were many other waste and recycle bins in the office, I decided to distribute them so that in the video frame the prototype is in the foreground, and some other ordinary colourful bins in the background. I recall watching Anja staring and adjusting this set up for a long time while mumbling to herself that it was too provocative, and eventually removing the ordinary bins. I remember teasing her about it and asked why we were staring at bins in the middle of the night. This seemingly trivial and slightly absurd memory contained some particularities I have since been trying to tackle in my research. Upon preparing to include this anecdote in the thesis I contacted Anja for a short interview, and she explained why she was so determined to get it right, and why my distribution of other bins did not work for her purpose in accurately reflecting the research:

'...The scenes didn't look right because it (the prototype) was never installed (in the office) so I tried to create the illusion of a real kitchen. And so if there was a different bin in the kitchen I probably said to remove it because it looks weird that we had other bins if that's our bin to focus on, so I became quite particular to create

a setting that's quite reflective of the research, or as authentic it probably could be when it was fake.'

Having spent more time working in the HCI lab I appreciate why the scene was too provocative in HCI terms. The BinCam project did not include an empirical study on how the prototype performed in comparison to ordinary waste bins. Although the prototype was intended to raise awareness of recycling in domestic households, it was not designed to replace traditional recycling bins. By juxtaposing the prototype with ordinary bins, my video framing accidentally made a comparison and prompted a different research question that was not raised in the research paper.

The special attention from a researcher who has authored a research paper on a particular project acts like a researcher's gaze that has its own unique visuality, just as a non-HCI gaze would see differently. Goodwin described this trained way of seeing as 'professional vision' (Goodwin, 1994). The HCI researchers I encountered were disciplined in their ways of seeing objects in the real world. In my previous experience of filming, especially when the subjects are people who are doing everyday activities, the framing is a very subjective decision made by a cameraperson. However, the researchers I worked with would scrutinise the elements visible in the frame, because the status of publication had conferred status on the knowledge they had generated from research outcomes, and had located that knowledge within disciplinary, rather than aesthetic or provocative practices. A video produced in this framing should not question what has been cemented, and so the narrative in these videos had to be linear, and the embodied experiences of the researchers had to be disciplined, retrospectively, to fit that framing.

4.4 Making Visual Provocations

I first encountered HCI research on the periphery, through the freelance video work, and when a project had reached the end of a research life cycle. I therefore understood research videos as the literal end-product of research: video-making signals the end. As an outsider, what was demonstrated through the video-making process was that dissemination was done in an orderly manner, in the sense that the script that provides the narrative of a video is established, once the research is complete. Working as a videographer I was not directly responsible for the quality of the research represented in the videos that I helped produce, however the videos were seen to reflect the research outcomes, as perceived by the

researchers. What will an enquiry into video as medium of dissemination 'look' like? The experience of video-making at Culture Lab with the HCI researchers offered an entry point to such enquiry, but crossing over from video maker to ethnographer and doctoral student presented complexities in my own research in terms of methodology. As a new student in HCI I wanted to adopt approaches that my colleagues were familiar with, so as to engage in conversations about dissemination in HCI. Since my introduction to the HCI workplace and joining the group officially, I had learned that most research projects organised by Digital Interaction members are practice-led, that researchers are encouraged to be hands-on with their work. Apart from reading and writing at their desks or having meetings and carrying out administrative tasks in the office, the academics were always busy going in and out of the office to fabricate things. They often produce and mend prototypes or design probes with traditional tools (e.g. hand tools for building metal/plastic framework for housing programmable circuit board, or ready-made smart devices such as mobile phones or digital cameras), the laser cutters and 3D printers. I would often find myself joining other colleagues in trying out an interactive prototype someone had just made, at other times I would be called upon to help document (photograph or video) a finished design.

4.4.1 *Annotated Portfolios*

Gaver and Bowers published their concept of 'annotated portfolios' (AP) in 2012, offering a different conceptualisation of knowledge in HCI (Gaver and Bowers, 2012). The argument they developed is that design objects, or artefacts, are embodiments of design thinking and research knowledge, and that textual accounts in publications of the research are secondary. The concept separates academic writing and artefacts in terms of the way they can be read or interpreted. In the example of AP demonstrated in an academic paper, Bowers thematised the outcomes of a design collection created by the same research team based on their shared design sensibilities as a 'portfolio', whereas 'annotations' refers to a textual account that accompanies a portfolio and that does not necessarily meet existing academic criteria for expressing design outcomes. Finally, in alluding to AP's physical manifestations, Bowers suggests that we should consider the potential audience, thus expressing a 'form follows domain' approach. In making research videos, I note that academics make their decisions about disseminating materials based on the audience it is intended for. Often these audiences are funding bodies who have created a demand for the videos in the first place. In this regard, if an AP is manifested in video form, how is it different from

dissemination videos? Although there are no clear guidelines or templates for AP, the authors may have signalled a departure from traditional peer-reviewed submissions (which creates standards) and thus encourage us to contemplate the connections between knowledge and physical objects. Hence it is arguable that AP is also a practice of knowledge dissemination with special attention to design research. The AP concept touched on the pragmatics of sharing design research through annotations, while critiquing the scientific dogma and rationality of dominant practice in HCI, constructed and maintained through peers recognising particular research outputs. In chapter 3 I suggest that this critique can be extended by considering the researcher's own identity construction through delivering research to her wider community (see section 3.3.4). Such critique need not be invented from within HCI. Instead I draw from a much older discipline, that of visual art, where many forms of human practice can be expressed and condensed through iconography for contemplation.



Figure 2. St Jerome in His Study by Pieter Coecke van Aelst, the elder (Flemish, 1502-1550)

4.4.2 *St. Jerome in His Study*

One of the most iconic images of scholarly work is, perhaps ‘St Jerome in His Study’ by Coecke van Aelst the elder [Fig. 2]. St Jerome was a scholar who translated the Bible into Latin in the fourth century A.D. The historical significance of his work is easily understood through the countless reworking of the portraits by different artists in every visual art period. The paintings are known for their recognisable, shared symbols in different compositions. St Jerome is usually depicted in a study sitting at a desk immersed in his work, while the desk and the surrounding are decorated with symbolic objects that identify Saint Jerome. One of the recurring features in the paintings is a skull placed on the desk, and some critics suggest it refers to Christ’s sacrifice, while others suggest it represents the urgency of scholarly work, as death is always approaching. Although the subject of this painting is religious, such paintings have accommodated many critical debates about human practices despite technological innovations and the growth of doubt about organised religion in our societies (Latour, 1987). Therefore, even if at first glance the painting and symbolism of St Jerome in his Study may seem to belong to a different time, remote from HCI dissemination practice, yet it essentially captures a spirit of contemporary scholarly communication. After all, I have already highlighted the enduring quality of the desk as an artefact that has quietly endured for centuries, and as a site that orients our bodies to engage in scholarly work (Ahmed, 2006). However, is a man working at his desk on the translation and preservation of knowledge an accurate representation of contemporary what academic life and work?

4.4.3 *Artistic Engagements*

By engaging in art criticism as a lens to critique research dissemination, via annotated portfolios in HCI, I anticipated that my arguments should be relevant to the discipline, not only theoretically but practically. My first attempt to engage colleagues in critiquing dissemination was at a group meeting. This was a semi-public weekly event where a researcher or guest would give talks to the group. I signed up to a slot to present my research questions as a way of gauging how my colleagues felt about the topic. I chose to show the latest (in 2012) video work by Hito Steyerl, a video artist and media philosopher who has written and created work commenting on the politics of image distribution (Steyerl, 2012). Her latest video, ‘Strike’ (2010)²⁹, was just 40 seconds long. In this short sequence you

²⁹ Strike (2010) by Hito Steyerl - http://ubu.com/film/steyerl_strike.html

see the artist quietly approaching a blank LCD TV screen with a chisel and unleashing a short but sharp impact onto the screen, causing the fractured liquid crystals across the screen to form an accidental pattern. From a performance art perspective, the artist attempts to disrupt the technology and perform its materiality. The performance does this by challenging our conventional vision of the TV as displaying content that represents others, and foregrounding the TV as a material object. By breaking the screen, the artist shows us the materials that make the images, while also deconstructing the image. In my creative practice such video provocation resonates strongly with the research questions I was trying engaged with. I assumed that it could translate into a HCI topic easily, and should yield productive responses amongst my HCI colleagues. However, my very first attempt at initiating discussion failed, in the sense that I did not receive any direct feedback. I recalled my then supervisor offering his views afterwards in suggesting that I may have stunned people into silence. I asked myself-was 'Strike' too vague? Did I fail to make the connections to representation sufficiently explicit?

4.4.4 Paper Prototypes

Having noted that my audience in the lab are mainly practitioners who are hands-on with research, I realised a purely theoretical discussion did not offer enough incentives to stimulate discussion. I needed a tangible objective to make the critique of dissemination less abstract. I set out then to create a design objective that would act as a talking point for colleagues to explore research dissemination. The making of visual provocations emerged as I tried to prepare workshop materials that might help guide conversations towards a visual art perspective on the material and performative qualities of research dissemination. To make the research question more tangible I decided to create my own response to Bower's AP paper (Bowers, 2012) by extending its argument into the materiality of the paper itself, and to do so, I needed present the paper as a construct. Instead of reading the text on annotated portfolio, as with the TV screen in 'Strike', I attempted to disrupt the academic paper by distorting its surface by transferring the front page on to an acetate, transforming it into an 'image' of the paper on a transparent background. Having created a 'paper prototype' with the acetate [Fig. 3] I then asked the colleagues who shared the same office to take part in a sketching exercise. I handed them the acetate, explaining that I was making a mock prototype of academic paper display that allows readers to see where a paper was authored. I then asked ten colleagues to choose a personal background for the mock acetate

prototype. This process was recorded and edited as a short video³⁰ and shown at semi-public event being held in the lab. This social event was organised by another PhD student in Culture Lab for researchers to showcase work-in-progress. The evening event provided a more relaxed setting and supported the elicitation of feedback from colleagues who came to watch the video. I earmarked the colleagues who asked questions about the video for my research and invited them to take part in a focus group study.

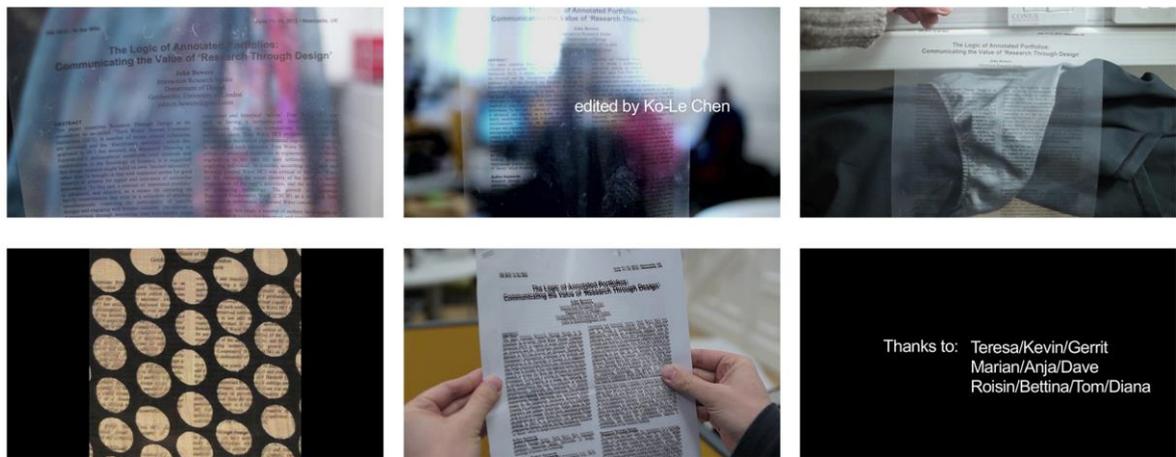


Figure 3. Screenshots of the provocation video. Photo: Ko-Le Chen

In creating the visual provocation video, I reworked the transparent, ubiquitous qualities of Microsoft's thin documents, and borrowed the 'cut-up technique' from the 'Humument' by artist Tom Phillips (Phillips and Mallock, 2012). The cut-up technique was pioneered by the Dadaists and made popular by William S. Burroughs (Lydenberg, 1978). Veal and Kim explain that 'the basic technique involves the cutting of a text or image into pieces that are then rearranged to create an alternative, nonlinear version of the original' (Veal and Kim, 2016). At the start of this ongoing project, Phillips found an old book titled 'The Human Document' by W. H. Mallock and started adding drawing on top of its pages. Indeed, there is a method for creating such seemingly random visual work based on text, but as the artist also expressed it himself: 'it is fun to fish the odd joke out of a dry text.'³¹ The creative process of making visual provocations was very subjective and dependant on the resources that were available to me at the time. I started by reviewing other artists' work that resonated with qualities of 'paper', 'technology', and 'documents'. As I have noted in section 4.2.3, the concept videos released by Microsoft have a particular visual language that not only

³⁰ Video as workshop prompt for PhD study (2012) - <https://www.youtube.com/watch?v=A8VOT6pIp0U>

³¹ Tom Phillips's Introduction to the 6th Edition, 2016 - <http://www.tomphillips.co.uk/humument/introduction>

showcases future worlds of computing, but also demonstrates the power of video as a medium for imagining such a future. In the 'Productivity Future Visions (2011)³²' video, touch display devices take on a more paper-like quality, while traditional paper documents become digital and interactive. The video begs the question of 'what will a document become?' through its transparent and light weight aesthetics.

As well as preparing a video as provocation, I also created physical objects that participants could look at and touch. Looking for a 'display'-like material that would allow associations to digital screens but retain the thinness like the acetate I found the lenticular to be a matching material.



Figure 4. Selected physical visual prompts created for the focus group, from left to right: the original lenticular image(s), acetate copy, gel-flex copy, and laser-engraving copy. Photo: Ko-Le Chen

4.4.5 *Lenticulars*

Lenticular images, more commonly referred to as 3D pictures, are an old fashioned and perhaps rather kitsch item that I had been collecting as a hobby. I decided to adapt it as a 'device' that can display multiple viewpoints. Starting with the original lenticular [Fig. 4], I

³² Productivity Future Vision (2011) - <https://youtu.be/a6cNdhOKwi0>

first attempted to transfer and translate the images by scanning and printing the digital image file on to different mediums. The materials I sourced came from workshop scrap piles and office supply cupboards in the Culture Lab workshop and the nearby architecture workshop on campus. There were cardboards, acrylic, acetate and yellow gel-flex materials. These each have characteristics which dictated the way I could print digital images on to them. For example, the gel-flex is a wax like material which can be melted and poured into a form, whereas I could laser-engage the image onto the acrylic. The resulting artefacts bear a family resemblance that serves as a physical analogy for the inherent complexity of research projects and the multiple perspectives one may have on a particular piece of research. That is, when you look at a lenticular image, depending on where you are situated, you will see a different image. The question I then asked was how does the process of interfering with the medium for the image change its representation? By transferring the lenticular on to different material, I sought to illustrate that the choice of the medium to some extent determines how the transferred image will be represented. In the following section, I describe the outcomes from two focus groups where I presented these visual provocations.

4.5 Focus groups

At the time of this fieldwork being carried out there were around 60 people working in Digital Interaction. The group was subdivided into many dynamic formations according to three broad categories: job titles (faculty staff, PhD students, technicians, administrators, research assistant, and research associates), research interests, and associated projects. These different groupings overlapped, and members of the lab used the groupings to locate colleagues when they were looking for a particular expertise. These groupings also signposted who, within the group, might be more willing to entertain the question of research dissemination in practice. Instead of sending an invitation to every colleague, I targeted those who had already engaged in the video I showed or offered advice on my PhD. There were 4 research associates (coded as R1-R4) and 2 fellow PhD students (coded as P1 and P2). They were divided into two focus groups: (R1, R2 and P1; R3, R4 and P2), each took place on the 18th and 19th of March 2013 in a room in Culture Lab [Fig 5]. Two research associates and one PhD student attended the same session. The pairing was important since different members of the lab had varying degrees of experience in terms of producing academic submissions and dissemination for HCI research.

The focus groups were audio-recorded (Appendix D), each focus group lasted 2 hours with a 15 minute break. The first hour of the focus group started with me introducing the artworks and videos I reviewed in the previous section as well other thin display technologies that were new at the time (e.g. air display, e-paper). The physical visual provocation (the lenticular and other materials) were shown to participants in the second half of the focus group.



Figure 5. Room arrangement for the focus group. Photo: Ko-Le Chen

A preliminary ethical assessment form was completed and this self-assessment concluded that no further ethical clearance was required. Each participant was given an information sheet about the focus group and a consent form to sign (Appendix B)

In the following section, I highlight the key themes that emerged through participants' engagement with the visual provocations. To locate themes from the focus group discussions I drew from guidelines in Rose's visual methodologies (Tolia-Kelly and Rose, 2012; Rose, 2016). Focusing on participants' statements when looking at visual provocations, my data analysis attempts to unpack 'ways of seeing' (Berger, 2008) in HCI through

participants' interpretive processes. In this context, the adaptation of Rose's visual methodologies is two-fold. First it supported the facilitation of the focus group discussions and the use of visual provocations. Secondly, it serves as an analytical tool for the identification of necessary elements for understanding participants' responses to the provocations I presented. According to Rose:

'interpretations of visual images broadly concur that there are three sites at which the meanings of an image are made: the site(s) of the production of an image, the site of the image itself, and the site(s) where it is seen by various audiences' (Rose, 2012, p. 19)

The themes reported below fall under these three sites of meaning making.

4.5.1 Video 'madness'

R1, R2, and R3 have had to respond to new video guidelines introduced by the ACM SIGCHI 2013 conference. Their past and recent experience in producing non-text based communication about their research included making video submissions at short notice and reviewing video submissions to conferences such as the ACM SIGCHI Conference on Designing Interactive Systems (DIS) and the ACM Symposium on User Interface Software and Technology (UIST). These experiences had significant impacts on the way they perceive video as medium in the focus groups. The history of the ACM conferences was a recurring topic and the different submissions tracks and guidelines for these conferences were the main reasons participants had considered different formats of publications. Their memberships of the conference provided more examples of videos produced by academics within HCI communities.

P2 was not aware of the variety of videos being circulated within the HCI communities, as a new student, like myself, he/she had not come across videos made for academic research as much as commercial videos or video art:

'But you're thinking about having a video not just as an illustration, or appendix to the paper, you're thinking about it as the main publication, right? (Me: Yeah, for example) Because the way I understand it right now is that the video is just an illustration, it's just something, something extra.' (P2)

R4 attempted to clarify the different status of videos that are available in HCI literature and R3 went further in explaining how the CHI conference introduced another video format called 'Video Previews':

'It varies too, right? Is it just a "Video Figure" that needs caption, or it's almost like a reference in a paper, or can it stand by itself, being sort of "YouTube-able" and sort of viral.' (R4)

R3 and R4 recalled an older tradition at the CHI conferences where presenters (authors) of papers would be given 30 seconds on a stage to promote their talk:

'It used to be 'Madness', you'd go on and you'd have a short amount of time to get, it'd be first thing in the morning and they run through all the papers that are on that day. And you just want to catch people's attention. And now they have these "Video Previews" which are on their YouTube channel [...] And so my video this year is just slides that I've captured as a video because it's like, well, it didn't make sense for the paper to try and reconstruct a video or to try and document something because it's about something that happened in people's houses.' (R3)

'We actually had long discussion in [institution name omitted] about these Madnesses coz they're sort of ridiculing and superficially selling and also they were turning into somewhat popularity contest, you know they wanna be cool and funny. And the junior PhD students at the beginning of my time there was like, I don't wanna sell out, I wanna do serious research here and some of the profs were saying, "well, we're all humans"...' (R4)

R2 added examples of 'good' and 'bad' video in HCI and clarify the role of video figure in academic submissions.

'...they [referring to researchers working in 3D interaction] make demos specifically for the videos, so they make all these demonstrations that have to work fully so they can put it in the video, basically the whole research is configured around the video, because you won't get accepted unless you have amazing video' (R2)

One of the visual features that identify a research video is the institutional affiliations, which are prominent in the examples we watched in the focus group. R1 and R2 inadvertently expressed why they are important, through example of these symbols' presence and absence:

'But that's interesting as well isn't it, coz 'that' [referring to the first frame of the video] immediately made me think: Ooh that's a conference paper, rather than a video. (Me: You mean this layout?) Yeah yeah it's just bang on like, (Me: Authors, titles, institution). With my "video preview" for CHI I tried not to make it look like

that but I failed. (Me: Why?) Because I realise people need to know who you are.'
(R1)

R2 compared how the writing of a paper affected the way the subsequent video was made, with a narrative approach to presenting an application R2 had worked on:

'Because in the paper [referring to a publication R2 has co-authored with other colleagues] actually we wrote like a story, basically tell a story of the application. (Me: Oh it's been written?) But in the video we do it as well, because the important thing there is situate the work in a context, coz it's interesting not just because of what it is, it's interesting because why it came about and what we're trying to do, so then that video is completely different.' (R2)

'Coz this [referring to a CHI demo video], to me it doesn't seem like an academic thing. It's like a marketing thing, and that make me think that they're trying to hide something or they're lying or they don't know what they're talking about. I don't know I just get that perception' (R2)

4.5.2 Status Quo

R3 and R4 were working on a project together and although R3 was confused by the lenticular and asked me to clarify its role in the focus group, they both reflected on their own work-in-progress in response to seeing the provocation. They described the writing process in academic submissions and debated the rationale and the archival quality of academic publication:

'But I think it does come back to this question of: 'What is the document?' So with the [omitted project title], there is an interface, which you can see and people can interact with it. So in terms of how you might present it, there's almost no need to document that, coz it in itself is a document but what you need to get to is how you arrive at that. So those small "tweaks" that you make, those discussions that we have.' (R3)

Writing towards publications can be a reflective process, as R4 explains, it serves to transform research findings to ideas that can be communicated to an audience:

'But I find that having to write it down, or wanting to write it down to communicate it, is also, it's a translation process, in terms modality, but also in terms of community - who you're talking to and by being forced to do that, you're also making sense of it for yourself' (R4)

Submissions of writing are also limited by the criteria and styles currently accepted in HCI venues. As R3 reflected, his process of writing up involves making 'designerly decisions'. It is

inevitable that things get left out during write up because a researcher cannot report every detail of a project, often that includes the emotional side of research:

'I don't know how you'd leave out that embodied sensory..., without getting to the heart of how this was actually constructed. And that is partly a lie on the part of academic research, it's partly something that we sort of try and pretend that we don't have emotions, we don't have to phone our participants 6 times just to have a meeting with them [...] fundamentally, or what you end up doing is to sort of try and pick out of the richness, these different, 1,2,3,4,5 design guidelines, or perspectives on the data, and that you sort of have to select and craft those slices of the data, for someone to be able to read it in a particular way. But you're not necessarily constructing or re-constructing the whole thing. You are making a designerly decision, and many academics will never see it as a designerly decision.' (R3)

Like R3 and R4, who understood the main purpose of communication amongst peers through publications, R1 pointed out that an important part of that professional communication is built around citations. Therefore, R1 questioned how submitting videos would be able to maintain the citational practice in academia:

'It occurs to me that that video is very ambiguous and the installation itself might be a bit ambiguous and that's "good", because it's a new media art installation it's meant to be somewhat ambiguous until you read the blurb [...] But then if you're moving into something like HCI or any sort of academic context where evidence is traditionally been textually based, you know, it's about building on previous works in a textual reference, citation manner. It becomes quite challenging to document what, use things like film.' (R1)

In comparison, the notion of using non-text-based media to report research created some confusion for P1, who claimed to be 'visually weak' and was hesitant to question the nature of knowledge representation through text and other media:

'This is all quite alien to me I have to say. Yeah, this idea of using more, like different forms of outcome for a research. Because coming from Psychology background, it's so constricted [...] something like this has never cross my mind, of what other ways can we articulate research. Um, for me it's always been you write it in a paper.' (P1)

4.5.3 Alternative Formats

In this section, I highlight the way participants reflected on matters of knowledge representation, specifically after they engaged with the lenticular imagery. The physical provocation introduced a visual art perspective on publication/dissemination in the focus

group, and participants considered the potential impacts that different media might have on their own practice. Each participant had an individual way of articulating what it would mean if they chose a different medium to represent their research. At the beginning of both focus groups I observed that we were mainly focused on the academic qualities of videos and how their content serves its purpose for scholarly communication. The ways participants interpreted video content depended on their research interests and experience in working with different media in general. When we reviewed the video playlists I prepared, most participants contested the use of video within the conference guidelines, but discussions moved beyond HCI guidelines after the physical visual provocations were presented. For instance, R4 and R3 unpicked the metaphorical implications from the series of lenticular transfers, reflecting on the implications of media proactively in relation to our identity and what would that represent:

'I guess there comes to mind this question of 'at what point do you lose the original?' It's not just a question of actual replication but actually in terms of the analytic distance you take' (R3)

'But in terms of video, I find, there might be something similarly productive, and constructive, in sitting down, what would it mean, to document [omitted project title], or [omitted project title] in video. What would it mean if we communicate it not in text, but in video. And what new things we ourselves doing about this, not just the viewers.' (R4)

R1 reflected on existing research practice at our workplace and offered me advice for the workplace study:

'It kind of strikes me that your PhD...what you need to do first. I guess as a starting point, is find out more about how these different types of media already impact upon research processes. Be that in a specific discipline, be that in the DI group. Because I think, they do, massively. But I don't think we ever really reflect on it.' (R1)

P2 suggested the opportunities to embody a video format by making it personal to the researcher and her/his research projects.

'I think these video documentations can be "your own", in terms of how you show it or how you design it. And that eventually reflects your work' (P2)

R3's research was related to food consumption and in his research, he followed his participants to shop for groceries. In response to our discussion on embodiment, he thought

about a potential material that would capture his own experience, but lamented that this approach is art, not academic:

'I thought actually it would be quite interesting to print my paper, that I've written, on shopping receipts, and to maybe even keeps some of the character breaks that you would normally have. And see how that would be interpreted by people. Now the problem is that's an art project. That's not an academic, coz it's not immediately consumable' (R3)

R2 also struggled to gauge how much creative licence we really have in HCI in terms of choosing different media to represent research.

'Say this is a beautiful piece of art, and this is the original thing. what's, yeah like what's lost, is there a translated what's lost in the meaning if I, although I can make an amazing film about something. What's lost in that. What's lost by doing... It might still be a valid piece of art. What do you lose from the original? So here, there's a lot of information lost in that, but there's also lot added there, in that I prefer to have that on my wall and that on my wall. But, does that tell me much about that (Referring to the original). (R1: And is it meant to?) Is that a problem in a scientific context, as it might be less of a problem in just a normal film context' (R2)

Throughout the focus groups, participants were mainly discussing existing videos that had been produced by others. When prompted to engage with the visual provocations, they responded with different imaginations of bespoke research outcomes. The way each participant visualised alternative formats differed, but their engagement nonetheless highlighted the fact that researchers are motivated to better understand the knowledge they produce. This meta-level of reflection requires supporting elements, such as the use of visual provocations to enable embodied thinking not accommodated by traditional text-based publications. Hence the focus groups' discussion on potential dissemination media, served as a tangible exercise in the workplace, to reconceptualise knowledge production in a reflexive manner. Both focus groups started by discussing the status of text for publishing research in HCI, and more senior members acknowledged that established practices are important for disciplinary recognition, but such communication has its limits. The lack of situated observation on what we do in our workplace reflects the rigidity of academic publications. The visual approach in the focus group helped me and my colleagues in addressing questions that are not explicit in the process of academic submission. Regardless of our individual research interests, the video reviews and visual provocations shifted our focus on what is usually taken for granted in the HCI workplace to seeing the workplace as a

dynamic place where each member is entangled in academic material and representational practices. Knowledge production and representation, as a practice, is a series of translations between different media. Unpicking the subtlety of a medium allows us to visually interrogate the effect it has on our professional work. The focus groups explored an uncharted territory for the HCI researchers in Digital Interaction and addressed a gap in the knowledge we have about ourselves. The HCI workplace emerged as an important site not just for knowledge production, but also how knowledges, in their various forms, are assigned different materiality as outcomes through a professional gaze (Goodwin, 1994).

4.6 Postcard Survey

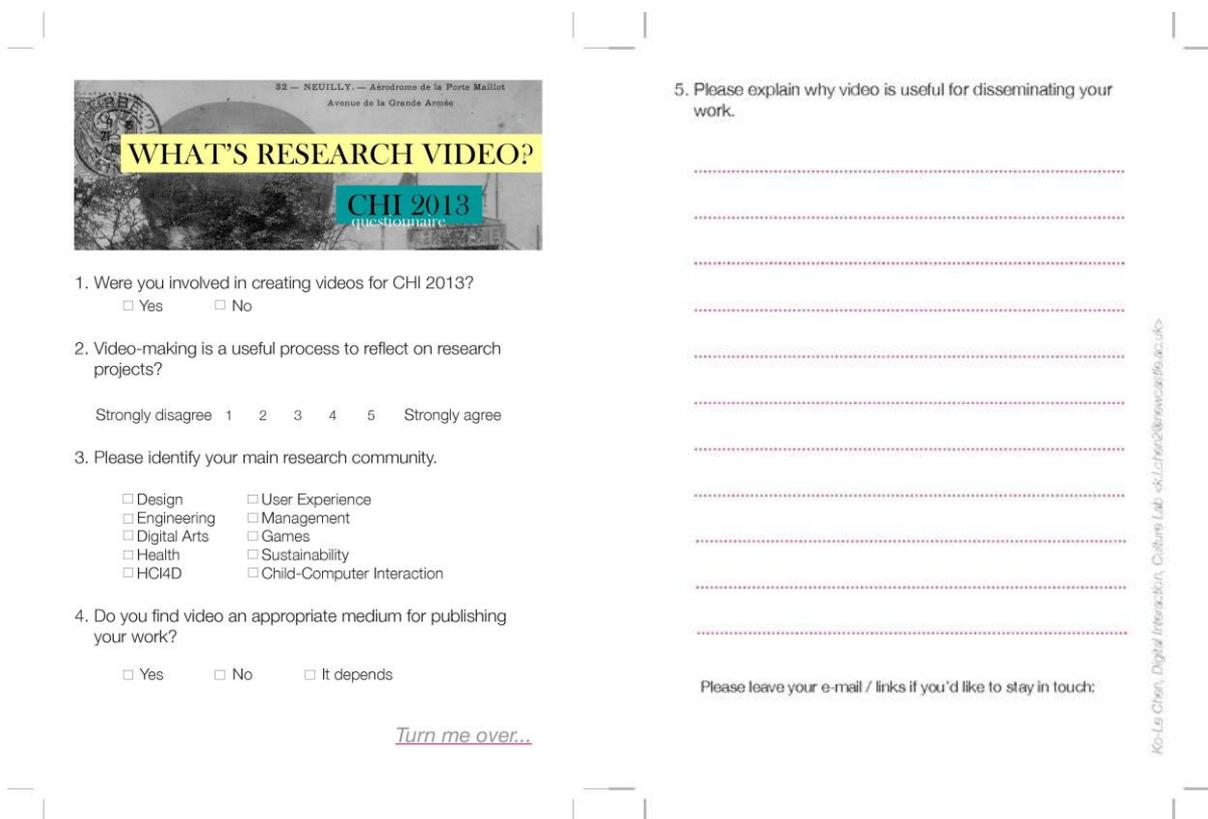


Figure 6. Postcard front and back (from PDF file). Design: Ko-Le Chen

In the final section of this chapter’s fieldwork, I describe a supplementary study that I conducted at the 2013 ACM SIGCHI conference. Following the focus groups, I drew from the history of CHI my participants shared and devised a short postcard questionnaire to gain a better understanding of the common video glossary in HCI. I devised the short questions based on the analysis of focus group data and produced a postcard-size leaflet [Fig. 6] to be handed out to and completed by conference attendees. The aim for the postcard questions was to enable me to get a wider perception of video in the HCI community regardless of the

research domains people worked in. Each question corresponds to a different aspect of academic practices, namely, reflection, publication and dissemination. In total I collected 48 postcards, and 30 people out of 48 left comments for question 5 (Appendix A). Since video at CHI was raised repeatedly during the focus groups, I wanted to verify how HCI researchers outside the Digital Interaction group also perceived this medium. I was seeking more context awareness about the CHI venue, it was not my intention to produce a representative sample of the CHI community. However, the feedback did reveal how HCI practitioners from other institutions also perceive video and the colloquial terms attached to it. For example, videos are compared to 'demo', which is another form of presentation:

'Videos are digital demos. It gives a general overview on what the research is about. Also it helps researchers appreciate other people's work more. Because they are able to see the visual aspects of the projects.'

As R2 explained to me during the focus group, researchers working in physical computing are more likely to use video to present their research outcomes, because of the nature of the interactions is visually-oriented:

'1. Prototypes die w/time, videos don't. 2. Show that stuff actually works. 3. Demonstrate concepts beyond paper (static) figures. 4. Reaches more audiences. 5. It's cool!!'

There is also the opposite argument that videos accommodate a different language for presenting research:

'It conveys complexities in evocative ways - it has a narrative aspect that we are "used to" meaning the telling of your 'story' is within an acknowledged format.'

The process of making a video to present also corresponds the 'designerly decision' R3 described:

'Two reasons: 1. Helps you distil your main research findings by forcing you to consider what really matters. 2. Helps you publicize and promote your research to the community'

While the feedback collected through the postcards is snapshots of a very diverse research community, it nonetheless captures the ways videos are interpreted by wider community members within HCI. The notions of video as demonstration materials resonated with the focus group discussions, especially with the researchers who are active in the CHI

community. Among this sample of HCI researchers, video is seen as a public-facing medium that present results effectively across research domains.

4.7 Summary

From the freelance experience to the PhD study, this chapter activates questioning of the nature of research dissemination by highlighting currently missed opportunities in HCI venues such as ACM SIGCHI. Through visually assessing prominent research video guidelines provided by the conference and its general reception by a group of prime audience members, the focus groups and postcard study show that HCI practitioners mainly perceive video and other multimedia as submission formats. Through reviewing video-making in HCI I unpacked the epistemological underpinning of video as a medium and show how it is currently interpreted through dissemination practices. I argue that the current understanding and applications of videos are limited in terms of reflexivity. Broadening the interpretation of videos would enable HCI researchers to explore more assumptions about knowledge and about ourselves as practitioner researchers.

Thinking creatively about dissemination through the exercise of video critique is not only about comparing traditionally text-based HCI discourse to a visual one. It allows us to broaden ways a researcher may wish to embody her/his process of knowledge production. As suggested by my own freelance experience, HCI authors may have kept themselves at a distance from speaking directly through the language of art, but as practitioners they have nonetheless had to confront a visual culture emerging within the HCI venues due to demands on effective research dissemination. By involving colleagues in the focus groups, I highlighted that the current practice of video-making in HCI supports assumptions that the medium is neutral and therefore there is a lack of awareness of the potency of this medium.

The focus groups discussion targeted video-making as a phenomenon in HCI and revealed how colleagues understood the medium. However it also shed lights on the lack of institutional support for us to reflect, on a meta-level, on processes of knowledge production and representation. These processes are dominant, or at least occupy significant amounts of our time as professionals in academia. The medium we adopt in expressing our ideas appears to be interweaved into how we shape our own research identity.

Finally, I suggest that HCI research and its relevant, approved academic outlets do act as sites for the interpretation and recognition of videos, and that the field, through its research communities, produces a unique visuality and dynamism. However, these activities remain

within the approved lexicon, and more personal, diverse and perhaps more challenging uses and interpretations of video are excluded, and their potential suppressed. Indeed, in consolidating and presenting the fieldwork for this chapter, I am unable to offer a fully visual approach to the enquiry that I carried out, but instead work with the conventions of writing a thesis to present selected examples, figures and links. However I suggest that the analysis of the data from the focus groups does capture some of the collective spirit generated in looking at HCI through a perspective on the workplace, and supports the argument that I am making, that a visual approach to interrogating dissemination achieves something that cannot be achieved by text alone.

Chapter 5: CHI booklet

5.1 Introduction

This chapter presents the second qualitative case study on research dissemination through an ethnomethodological account of a print material production. I describe the production process of this print material as part of routine work of the Digital Interaction group at Newcastle University. Upon revisiting my own analysis of the initial textual account of the production I developed two analytical categories. In part one, I present the outcomes of an ethnomethodological study of the 'CHI booklet' (a shorthand term for the print material). In part two, I offer a meta-critique on the limitations of an ethnomethodological approach to studying contemporary academic dissemination practices.

During the second year of the PhD I asked to transfer to a desk to the largest office space in the building, where most administrative and ad-hoc meetings amongst senior academics and administrators take place. As I immersed myself in this environment, I became more aware of the routine of paper writing and publishing through the production of the 'booklets'. This artefact first caught my attention when a colleague who was organising a conference needed to produce a new one so that they could be distributed at the conference event. Because it was the day before the conference, the booklets had to be made in-house, many members working in the main office were drawn to help out with photoshop, physically cutting and pasting papers to make the booklets. Amid this hectic but organised exercise, I listened to my senior colleagues' talk and found out that it was the manager's decision to produce the booklet at the last minute, but to my surprise most colleagues seemed to be in agreement that making and distributing the booklets at a conference is important and did not mind the stress it caused. This backdrop of activities in which I became involved enabled me to conceive of a form of participant observation, where I would learn to do the tasks required and also document their processes.

Following the fieldwork presented in the previous chapter I continued to explore opportunities to visually interrogate local dissemination practices within the research group. After reviewing the status of video-making in HCI through conference submissions, I maintained the focus of my inquiry around existing and dissemination-related activities that research group members were actively involved in. These activities often came to my

attention because they produced artefacts, and it should be noted that by artefacts I refer to conversations, as well as physical and digital objects. The conversation is an artefact that carries meaning and shapes action, and requires analysis as research data. The production of the CHI booklet by Digital Interaction was a process that revealed both the objective of research dissemination, and also illustrated an array of human activities that pertain to dissemination. For simplicity in this chapter I refer to the CHI booklet as the booklet, and Digital Interaction as the research group. The production process I discuss refers to the making of the physical print copy in print size A6 [Fig. 7]. A digital version of the booklet is available for viewing on the official group website, under the 'impact' section, 2014.

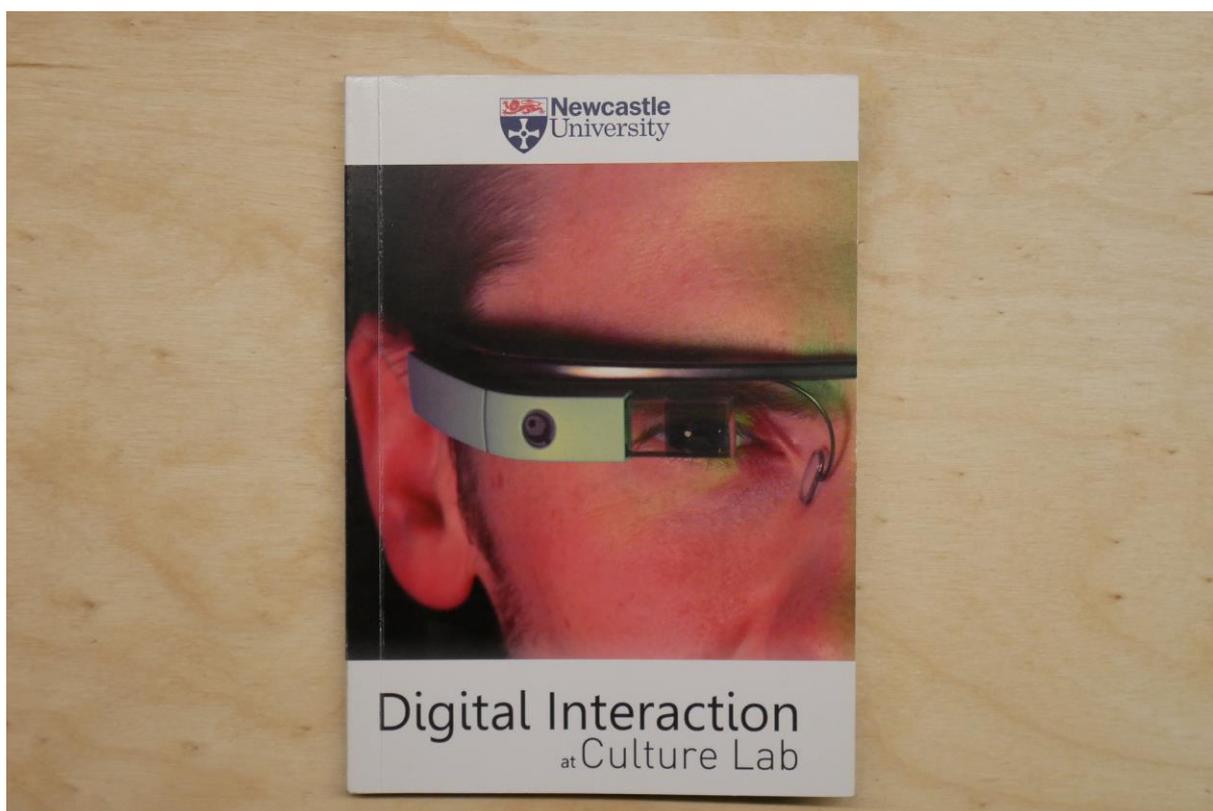


Figure 7. Print copy of the CHI booklet. Photo: Ko-Le Chen

Part one (5.4) of this chapter describes how I came to make observations of the booklet production, before discussing the ways the booklet as a medium for dissemination was understood in the workplace. I then move on to suggest how the medium achieves the disseminating of research. I reconstruct the production process in three stages, first, in section 5.4.1, through an account of a production meeting with the senior academic responsible for its production; second, in 5.4.2 through examination of the work of collating and editing text and images; finally, in 5.4.3 I comment on the materiality of the final artefact. These stages are written from a participant-observer perspective, and in doing so I comment on my work relations to the people I interacted with during informal conversations

and ad-hoc interviews. These interactions formed the basis of my initial insights into the decision-making processes of my colleagues. I pay special attention to their decisions related to practices of research dissemination within and outside of their respective HCI audiences.

In part two (5.5), I draw from sociological critiques on the arrival of audit culture in British higher education and its implications for academic workplaces, paying special attention to the way ethnographic work is considered as part of or outside the audit culture (Power, 1997; Strathern, 2000). I am interested here in demonstrating the role the booklet plays in the management and coordination of researchers and their projects, and the implications of these routinised forms of managerial control.

In part three (5.6) I reflect on and critique the ethnomethodological approach I employed on this case study. My reasons for developing this meta-critique of the methodology in this chapter are two-fold. Firstly, my attempt to study dissemination in-situ in an academic workplace necessitated a personal reflection on academic culture and its impact on the methodologies currently available. The limited resources on critiquing one's own workplace also motivated an experimental approach that follows, in chapter 6. Secondly, my experiences as captured in the booklet study demonstrated to me how research excellence is performed, within the prevailing neo-liberal culture of institutional management in universities. Hence the critique this chapter produces has direct implications for the future of academic practice and research culture in institutions (Reed, 2002; Martin, 2011).

5.2 Workplace Study

There are many sociological frameworks for the study of professional work. The most prominent method that has been adopted in HCI discourse suggests ways of understanding people's ways of working in order to inform the designerly intervention of system designs (). Such is the programme of ethnomethodology in HCI. This study of the work of booklet production focuses on the doing and making. First it distinguishes 'work' as what people do at a workplace, focussing on anything that is achieved through 'doing'. In Button's terms: 'Ethnomethodological studies of work, then, are about how people do or achieve what can be seen as, talked about as, witnessed as, characterised as, demonstrated as, displayed as, and the rest, a job of work' (Button, 2012, p. 679). This was the epistemology I adopted, and in my learning via an HCI workplace, I believed that doing this study would lead me to a

designerly outcome, in addition to or as part of the ethnomethodological process. As my peers demonstrated to me through our everyday interactions in the office, I learned that through the study of how tasks are carried out I could see how any given order is constructed (this is how I understood it then, in 2014).

As the workplace study method suggests, an observer's position (both socially and geographically, in my case being a student with desk space in the same building as other students and academics) is precisely what enabled my access and therefore provided a 'way in' to understand routine work. Although the ethnomethodological approach suggests a degree of disruption to the research is likely, in my case this was minor, as I tried to learn to do the job of the booklet production and deliver it. I could not find a workplace study of an HCI research group in the contemporary community, apart from that of my own colleague and a study at MIT, both focussing on media relations on reporting design (Elish, 2011; Vines *et al.*, 2013). Although these reports did not directly discuss the workplaces of HCI researchers, the issues raised in them were relevant to the practice of dissemination as part of the routine work of HCI research.

5.3 Role of the Booklet

As a project, the booklet seemed like a good fit as an entry to my version of a workplace study within Digital Interaction. My ethnomethodological approach attempts to unpack the production of work, defined earlier as what people *do* in the office, and to understand how through the production and distribution of this material how dissemination is considered as happening, having happened, been performed or is finished. The booklet allowed me both to see and study how my colleagues were working, and how they considered their own dissemination practices, as well as allowed me to engage with dissemination production directly myself as a researcher in the workplace. Therefore, the following section's ethnomethodological account of dissemination through a booklet production is part methodology and part the reporting and analysis of my experience of working in this way.

After joining the research group as a PhD student, I continued to work as a videographer and photographer. However, due to the visa regulations imposed on foreign students (which limited work conditions and hours) and the pressure from doing my own research, I decided to reduce the amount of non-academic freelance work I undertook. By adapting my

commitments to fit my life as a student, I began receiving different types of work from academics working on the same campus. The reputation and location of Culture Lab in Newcastle was well known to academics along with arts and culture practitioners in the city.

The building hosted the research group I was part of as well as other academics, administrators and students, and regularly attracted a lot of visitors, and the building accommodated visitors as well as engagement between staff and students through a large reception area and multipurpose, bookable venues. From the summer of 2013 to the summer of 2014 (roughly the time during which this chapter's fieldwork was conducted), I worked in a variety of jobs ranging from proofreading grant application documents made by academics in the workplace, co-authoring funding proposals, acting as a research assistant during project deployment, and filming and editing video lectures along with public lectures. This work experience was different from being a freelance photographer or videographer for project documentation, as it was only available to me as work for members of the research group. Each commission varied in terms of scale and commitment, and some of these jobs took two to three months to complete. By working on these different projects, I continued to play different roles, as a videographer, a researcher, and as a postgraduate student.

My experience of proofreading and writing funding applications provided opportunities for productive work relations between me and senior academics which differed from the supervisory relations typically afforded to PhD students. The interplay of these different roles created instances where I was able to encounter bureaucracy, and understand the structure that supports bureaucratic practices in ways that were not available to me in the role of student. I note here some examples of work experience and collaborations that I was involved in not just to illustrate events around the fieldwork, but to highlight the rich and complex nature of staff relations in the workplace and to explain how I gained access to participation in and observation of the process of making the booklet. It also helps to situate me in the workplace; to draw inward the scenes I describe as "from within".

5.4 Participating in the Booklet's Production

The research group had produced its first booklet in 2012 and since then the production has become an annual routine that takes place around the beginning of the year (after the Christmas break) when the first peer-reviewed results from the ACM SIGCHI conference are

released. In 2014, 27 group members attended the CHI conference and the booklet's production was organised so that the final printed copies were ready to be transported before members boarded their flights to the conference destination. Once booklets were printed (around 1000 copies) they were handed over to members who loaded them into their suitcases and distributed copies at the conference venue. Some booklet copies were also displayed in the reception area in the open-plan office; these copies were often handed out to visitors or new members of the group as a way of illustrating the portfolio of work carried out by members. Even though I had travelled to a previous CHI conference with the group, I was not featured in the previous booklet and had no part in producing or distributing copies. I also recalled hearing differing opinions about and comments on the design of the booklet from colleagues who were featured in the previous edition. In addition, the booklets were not archival in the ways that traditional publications are since they did not have ISBN numbers or metadata on the prints. Hence, the opportunity to study the booklet emerged from my own unfamiliarity with its production process and contestations within the group around the design.

According to the Oxford dictionary of English, a booklet is 'a small, thin book with paper covers, typically giving information on a particular subject'. What information can the production of such print format reveal about research dissemination? That is the question I started with when I first envisaged an ethnomethodological study of this artefact and proposed it to my supervisor who recommended that I contact the senior academic who had organised the booklet production since it was first implemented. I emailed the senior academic an informal research proposal as a request to take part in the production of the booklet and my proposal was accepted. The study started in March and concluded in July 2014 and my data collection at the time was initially organised around assisting my colleagues involved in the booklet production as they required. I also collected data from interviews both with colleagues involved in the production of the booklet, and with colleagues whose research would be presented in the booklet. In total, I conducted 23 interviews (Appendix C) which were audio-recorded and transcribed (Appendix E). Amongst these interviews, 16 one-to-one interviews were partially necessitated by the booklet job, whilst 7 interviews (4 one-to-one interviews and 3 group interviews with two participants in each group) were specifically arranged after the booklet production concluded.

5.4.1 Production Meeting

In this and the following section, I present instances that called for my attention during my participation in the booklet production. As far as I was aware since joining the group, the booklet had been designed by a freelance graphic designer, but the actual process involved in producing the final product was rather opaque to me. Those who had made successful submissions to the CHI conference were required to provide content for the booklet, which collated and presented these submissions on a single or double-page spread. For most members providing the text and images of their CHI submissions was the means by which they engaged with the production. In previous years, the task of organising collection and collation of this material was also delegated to student assistants by the senior academic managing the group. Based on this peripheral knowledge about how the booklets were made, my initial proposal for my own participation was to approach it as a design project, offering not only administrative assistance but also my own visual expertise in the design of the booklet. The first meeting I was asked to join was a production meeting with the external graphic designer and the senior academic. Since I knew that the graphic designer was attending, I brought along a larger format print published by Microsoft Research (Harper *et al.*, 2008) as a prompt to discuss possible alternatives and directions for the visual design of the booklet.

My attempt to start a conversation on the booklet's aesthetics was short-lived, with the senior academic quickly turning his attention to discussing our availability and pay with the graphic designer, before confirming that things will be 'business as usual'. The three of us went on to discuss what needed to be done for the booklet, with the senior academic steadily delegating tasks to me and the designer. I was to assist with collecting and collating image and text content for the graphic designer to put together in templates from previous booklets.

As mentioned in the previous section, there were 27 members scheduled to attend the CHI conference in 2014, and this information (a list of group members registered with the conference) was presented to me during the meeting on a spreadsheet that the senior academic had brought to the meeting. Prior to our meeting, he had sent me a different spreadsheet listing different categories of booklet contents. These were different types of submissions that members had produced, including academic papers to be published in the

conference proceedings. According to the academic manager, 15 full papers had been accepted by the conference. These papers, with their authors' names, profile photos and project photos would populate the first section of the booklet. My task for this part of the booklet was to rewrite the abstract sections of these papers so that they became short 'blurbs'. The manager explained to me that these should be short texts, based on the papers, but more accessible to non-academic readers. At the time of the meeting it was not clear to me or the graphic designer what additional (non-full-paper) submissions had been made, so the task of finding out what those were was also delegated to me. To help me "chase" this information, the manager suggested that I reach out to people in person or by phone calls instead of via email. This provided me a constructive reason for speaking with other members and finding out what they thought about the booklet dissemination while collecting necessary materials for the graphic designer.

5.4.2 Editorial Process

In starting my newly assigned task, I had two spreadsheets, copies of 15 full conference papers and access to a shared Dropbox folder. After some cross-referencing, I could see that 12 out of the 27 members attending the conference were authors of conference papers. This left me with 13 other names on the list unaccounted for (excluding two senior academics who represented and managed the group and would be attending the conference). On later reflection, the two spreadsheets I received from the manager made sense, as they were for cross-referencing so that I could chase information from group members, filling in the gaps in the manager's knowledge of conference submissions. After the production meeting, I first approached the 13 unaccounted members to find out what their planned submissions to the CHI conference were and copied this information onto the spreadsheet in the Dropbox folder. My search revealed that apart from full-length conference papers, members had also written short papers, workshop proposals, and other short texts to present their research in the various configurations that the conference had made available that year.

As indicated above, the assistant role necessitated data collection for the spreadsheets, and the things I needed to collect from my colleagues were different lengths of academic texts and photographic documentation that they submitted to the peer-reviewers of the conference. The textual accounts of their research from these submissions was to be the main body of the booklet as the manager had emphasised during the production meeting.

My priority after the text was collected was to edit them into 'blurbs'. But not every piece of text submitted to the conference required this treatment. Even though it was not clear to me why only the full-length and short conference papers needed to be re-presented as blurbs in the booklet, I was aware that translating the text from these papers was my priority. However, editing other members' written text, especially texts that were already (or accepted to be) published was a rather unusual process, and my lack of experience (as well as being a non-native English speaker) ran the risk of misrepresentation. To work around this challenge, I opted for a journalistic approach through interviewing the members who authored these conference papers. The interview questions were devised to elicit personal accounts from these members about their papers and the research represented, and the role photography might play in the representation of their knowledge. These interviews were audio-recorded and transcribed. This process gave me a sense of members' own views of the research they have published, and the transcription materials provided a template for creating the corresponding blurbs as required by the manager.

Upon completing my first draft of the blurbs I returned them to my interviewees for approval. Following their approval of the first draft I uploaded the blurbs to the Dropbox folder for the manager to check. The manager was rather disgruntled when he came to see me about the text, and referencing the previous booklets he explained why he thought the quality was not good. This, in his view, was because I had presented the blurbs in a question-and-answer style format - intended to let the individual authors explain their research to the reader through a first-person account. This journalistic approach meant that the blurbs had deviated too much from the precision found in the original conference papers and their abstracts. The verbal style was too informal and overall the blurbs lacked a 'group coherence', although they were cohered through the framework of the questions. In my second attempt, I tried to improve the text by removing the Q&A format and merged members' responses to my interview questions into a single edited paragraph. The resulting blurbs were rather like the abstracts in academic papers in terms of length, but with the language slightly pared down. These updated blurbs were passed on to two other senior researchers in the group (P1 and P2) and my involvement in the booklet production came to an end, although I continued to receive group emails about the booklet's progress for some time. The day before the conference a thousand copies of the booklet were delivered in the early hours to the home of one of the group's administrators before he left for the airport.

Colleagues who were boarding the same flight each recalled loading a stack in their luggage before getting on the plane.

In cases where members did not use or have available any photos or suitable imagery for their submissions I offered to take photos of their projects. Discussing what photographs to shoot or use from online resources became productive opportunities to speak to members about the booklet as a medium. As a video practitioner and photographer, I was inclined to interpret the connection between an image and the context around it. Building from experience discussed in the previous chapter, I was interested in the motivations underlying any visual documentation of research projects, and what photographic criteria there may be for representing research. Conversations around such matters would be possible without the premise of the booklet, however, speaking to members about their written text and photographs during the ad-hoc interviews allowed me to capture the connections they made between different materials of dissemination in action. In most cases I was able to have in-depth conversations with members about their research over the pragmatics around the booklet contents. Several members accepted my offer to create original photos for their entry in the booklet. Nonetheless these exchanges were rather transactional. They were discussions in which we were aiming to deliver content so that the booklet could be made and so fulfil our individual commitments to the dissemination of the research group's output. In the next section, I draw from my experiences of these transactional exchanges to exemplify characteristics of research dissemination through the booklet as the organised, routine work of an institution.

5.4.3 *Materiality of the Booklet*

This section presents my reinterpretation of the fieldwork three years after it was conducted in 2014. The ethnographic data collected in the workplace necessarily contains encounters which are trapped in historic time. Therefore, my aim for this section is not to create further analytical distance from the subject, but to highlight how research dissemination emerged as a meaningful event through the booklet production. The textual account of the ethnography I produced focused on my own understanding of how the work of assisting booklet production was completed. In revisiting the account of my participation, I address the issue of my positionality and my consequent incomplete understanding of the process, shaped from my position in the workplace, thus extending the ethnomethodological account to

include the challenges of interpreting my own experience (Clifford and Marcus, 1986). By analysing my participation in the booklet production, I identify three characteristics of research dissemination in this case, namely 'consistency', 'excellence' and 'indexicality'. These were qualities established by the senior academics as criteria for good textual and photographic content ready for dissemination. These criteria shaped the booklet production and imposed a set of dissemination standards that I failed to grasp as a PhD student new to this local academic practice. By acknowledging the partial nature of my experience in the editorial process, my analysis of the interview data focuses on conversations with members of the research group where a set of tacit knowledges regarding dissemination are made visible. Therefore, my participation allowed me to witness, in hindsight, how different members of the group with different capacities, achieve coherence, maintain indexicality and perform excellence through the booklet as a visual medium of dissemination, but also how they are disciplined by their knowledge of the rules of production.

5.5 Producing Consistency

Due to my attempt to promote an alternative reading of the booklet as a representational medium for individual researchers, certain implicit criteria for the booklet became visible. For example, the manager's response to my first draft of the blurbs was that the text was too informal and lacked coherence. Such expectations for the blurbs were unwritten rules, nor were these rules made clear to me during the production meeting. After the group returned from the conference I arranged separate meetings with the manager, P1 and P2 (both research associates). These three members became the core editorial team towards the end of the production, as evidenced through the group emails I continued to receive and from casual observations I made inside the open plan office. I asked each participant to fill in the gaps for me about what went on during the last few days before the booklet went to print:

'There were aspects of layout. But all the big decisions have been made then, it was just about the consistency at that point' (The manager)

'So how was that [consistency] done?'

'So there's always error in it which really annoyed me. Last year there was an error in the abstract (of the booklet). Find art instead of Fine art. This year the book's been printed wrongly. So obviously the proofs were wrong. So this year the margin's all wrong. So there're always errors. But all that stuff is around printing.'

'It's quite interesting where you see things like [anonymised RA] written his piece, he's written "social intervention", you know, use sort of language we wouldn't use in the paper [...] Even P1 spotted that and thought, uh, re-write that. So things vary, some people are very sensitive to the language and some of them aren't' (The manager)

The representation of published knowledge produced by group members for dissemination seemed to be motivated by a range of criteria relating to portraying the research group as a whole. It is not clear how the language of the text - deemed appropriate by peer-reviewers for publication in the academic paper - is not fitting for the manager's idea of the blurbs. I asked P1, P2 (both research associate) and P4 (a senior academic) how they understood the quality consistency and how they carried out the editing. P2 explained how he understand this abstract notion of consistency as part of the work of booklet production:

'[...] So I guess I was seen maybe as one of those people who could oversee both the production, also the research element, what you were doing. Or maybe just facilitating that process. Also having maybe that kind of overview of projects that were happening I think probably, when it came to the production of the booklet. I know towards the end of it, myself and P1 were asked to adjust text and fit a certain style. And there was an Excel document. Some of it was adjusting minor wording things. And some of them is just trying to say, well, this isn't what the research is about. There was a desire to step away from the papers and represent in a broader context [...] So it was difficult to keep that balance of "is this about the research as a whole" or "is this about the paper?" So that was quite complicated.'
(P2)

In P2's words the process was complicated but the understanding of complexity was also exclusive to the people who the manager entrusted to complete the task. Drawing from the manager's account of the booklet's completion, I relayed the same question about consistency to P2 again:

'I find the consistency amongst different projects in the description (the blurb) is quite a hard thing for me to grasp.'

'Actually I think in a sense Ko-Le it was a very difficult thing for you to do. Because...so people are very...well, a lot of academics or researchers are quite protective over their text. You know, when you do a PhD you become an expert in a very small sub-field. You're an authority on a small subject and theory. And you are the world expert. For the booklet we wanted to create a balance of details and concreteness but also maintained a level of ambiguity' (P1)

'As in it (the blurb) could speak to the subject, but might misrepresent the paper?'

'Yeah, precisely. Speaks to some of the issues, but misrepresents what the paper is about. My role here in the lab, and someone like P2, definitely like the manager and P4 (another senior academic). We move quite fluidly between quite a few projects. That means. I have quite a good sense of what people are trying to say and what they mean. And it's very hard to explain but you get a sense of what they mean.
(P1)

Organising and composing different narratives for each submission included in the booklet required overview and in-depth understanding of different research subjects. This was evidenced by the way P1 and P2 explained how they achieved editing the text for consistency, requested by the manager. Whilst P1, P2 and the manager were actively involved in the work of editing text and proofing the contents for print, P4 was mentioned by P1 to be one of the members who also shared a similar overview of members' research projects. During my interview with P4, I learned that although he was not directly involved in the booklet production this time round (in 2014), he was one of the members who envisaged producing the booklet for the group. I asked him to explain how the booklet came about and whether he was aware of the challenge of keeping consistency across the text:

'So for me, part of the purpose of it was actually a calling card. And that was part of the thing about doing a push for CHI publications. And this was sort spin-off from that. When we thought, ok we got these publications in, why don't we put together a booklet that just outlines it, so that you can give them to people [...] So, that was the main idea, and to sort of promote visibility of the group as a whole. What's interesting of course is actually, interesting and a struggle sometimes to, capture a sort of big narrative. When everyone is writing their own little narrative and I know the manager particularly, sort of every year – you must have experienced this – kind of goes through them, and tries to rewrite them a bit and tries to get, he often says, and it's usually a good researcher, miss the point, and you know, need to lift this up a bit.' (P4)

By participating in the editorial process of the booklet I had anticipated finding instances of research dissemination in action. P4's understanding of the criteria for the blurbs shows that the ability to produce legitimate content is dependent on a member's institutional status. Therefore, the difference between my approach and the senior academics' approach to editing the text for the blurbs helped to unpack how consistency is safeguarded as an integral quality of institutional dissemination. The response from the manager, P1, P2 and P4 shows that group coherence is not an *a priori* condition waiting to be uncovered. The consistency across the edited text about a range of research projects was dynamically produced. Since the beginning of booklet production this work had been 'business as usual' from the manager's point of view. As the editorial work was routinised, the reasoning and

interpretative skills required to do the work was reduced in importance (Suchman, 2000). As a result, there were no essential qualities or clear definitions of language or visual formatting for representing research of diverse themes in HCI. In the case of the blurbs, what makes a collection of dissemination materials appear coherent relies on the local politics that support the senior academics' overview of individual work. In other words, their positioning as part of university management with responsibility for ensuring good results in measurements of research quality placed pressure on them to see the work as a collective production, meeting external standards, to which individuals needed to conform (Martin, 2011).

5.5.1 Performing Excellence

Research dissemination of the research group's output is organised as an institutional practice which encourages a diverse range of HCI projects with different agendas to be perceived collectively. In P4's term, the booklet provides a bigger narrative that is sometimes overlooked by internal members, and the aim in creating the bigger narrative is so that the collective work can be presented to external audience, not strictly academic practitioners, but potential collaborators in the public sector (i.e. city council, local and regional charity organisations). Therefore, individual efforts are woven into pre-formatted pages in the booklet by senior members who adopt managerial roles to represent the group's work to an external audience. For the manager, who interacts with various stakeholders and academic peers regularly, this physical artefact is a device in which a collection of his colleagues' work can be displayed easily:

"The big thing you can communicate through the booklet is the volume of work we do. Which gives an indication on how significant we are as a group in terms of the field [...] This is meant for people to flick through it. So it's more the fact that you make the effort to put it all together for people." (The manager)

'Is this going digital?'

'No no we'll always do a print one. Definitely, yeah, yeah, otherwise you have nothing to give to people. I mean why would someone look at it anyway if it's just a website. So for me, it's all the fact of you physically giving them out at CHI. They come to a meeting here, you give them the booklet, they take it away, flick through it. It's really important media' (The manager)

What about other members in the group, what does the booklet mean for people who are not proactive during the production? The manager lamented that the production is still badly organised which means that only a handful of people get involved:

'I think people think it's still something that's done to them rather they're doing collectively. [...] In the first year [of PhD], it's just learning to see what the significance is as they don't know what it is. I don't know, I think whereas P1 took on that responsibility coz he's looking for the opportunity to take more leadership, realise it's important and he knows he can do it well. So he just takes it on. And he's taken on that more as he's taken more leadership in the group.'

In contrast to P1's proactive role, a fellow PhD student (P7) raised an eyebrow when I suggested that perhaps the booklet could place more focus on people's work in general rather than their paper submissions, as I thought this might provide more creative license for members to actively engage in the production:

Because the paper is already accepted by CHI, I feel like there's almost no need to explain its relevance [...] I wonder if there's a middle ground where the page (in the booklet) can be more about your work, rather than the paper specifically?

'I think this [the booklet] should definitely be about the papers (Me: Oh I see for your page?). No, in general. Did the manager say that this should be showcasing people?' (P7)

'No, I'm just interested in what you think the pages could be'

'OK, cos I think he'll shout at you if you start saying that this is about people...' (P7)

Similarly, other participants I interviewed were reluctant to discuss the nature of the booklet and how the pages related to their broader work practice. For the research group members, their submissions have been accepted by the CHI conference which is a prime destination for work in the field of HCI. The status of being accepted by the conference represents achievement in research, and their entry in the booklet materialises such achievements. The booklet is shared in various directions by the manager who describe how he uses it to communicate the group's excellence through the booklet:

'The good thing is the books [booklets], they've morphed into this thing where we use them to present, when people come during the year, we give them out as examples of our work and we use it to try and create some identity for people within, for people to feel membership for the group as well, that they got things in there. So basically, everyone is working towards papers for there (CHI), they organize their timeline so they got some good outputs coming out there and publish after. But the book sort of just crystallise that. I actually use it internally. So, then

what I do also is present it, send it to the senior academics, so, the vice chancellor, the PVC, the members of the executive board, my head of faculty, my head of school. So often I use it as a bit of internal promotion as well for the group' (The manager)

P5 (PhD student) and P6 (Research associate) have understood the promotional practice that underpins the booklet production and their explanations of what this artefact is for reflected the way the manager went about organising the booklet production:

'[...] if anything you're representative of an agenda within the group. Does that make sense? So from day one my research has been incorporated into the Digital Civics agenda. Willingly or not, I kind of got really sucked in that agenda, which happened to fit in totally with what I was doing, obviously!' (P5)

'I had stuff where, the photo that's gone in is not the right one, or the text not been quite right. But, to be honest, it's never really bothered me, because, in all these processes, the last draft always gets sent round, so I've kind of, always looked at it, so if I don't check it properly, it's my work. Nobody is trying to misrepresent me [...] Like nobody in the group is familiar with every single research projects that's in that book (booklet). (Me: there're 16 full papers) Yeah. Absolutely. So, before you get to the sort of the political high level thing that only the manager and P4, and to certain extent P8 (another senior academic) who probably have an overarching idea what they want to present the group as, um, like you just, nobody knows the details of each paper. Certainly nobody's read them all' (P6)

The promotion of the group to the University's senior management indicates the increasing pressure for academics to showcase research outputs. External pressures such as the Research Excellence Framework, an assessment set up for academic peers to review qualities of research across disciplines which last took place in 2014, have strong disciplining effects on research and dissemination. While conference or journal submissions are aimed at peer readers for debating and validating scholarly ideas, the dissemination of the submissions material through an artefact such as the booklet shows a different aspect of academic exchanges. As the manager suggests, the booklet, with its property of bonding, brings together members who worked towards and published in the same academic outlet, the CHI conference. This type of promotion of their achievement is not intended to engage peers in scientific debate about the validity of ideas, but rather, it performs the institutional affiliations of those ideas, presenting the status of published ideas, rather than the ideas *per se*. From the spreadsheets to various text editing templates, to the PDF files of the final proof, researchers' ideas are mobilised and rendered as units of research excellence. The

booklet does not afford opportunities for an individual's research ideas to interact further with the materiality of the print. As this is not part of the routine work of dissemination for group members, it explains why the participants I interviewed showed very little intention or desire to take part in thinking critically about the booklet as a medium. As P5, P6 and P7 all demonstrated, they are aware of the performance routine of group promotion and have already identified the people who are 'in control' (Munro, 1999).

From learning about the editorial process, it emerged that the booklet production is motivated and shaped primarily by the pressure on managerial actors to make the group work visible, and to make it visible in specific ways. The different facets of academic exchange (from purely scholarly debates to external quality reviews) also explains why dissemination takes place through different channels. The making of the booklet highlights the demand to perform research outputs, something that traditional publications alone cannot achieve. The organisation of the booklet relies on hierarchical relations between researchers, those who actively assume managerial positions work under the influence of corporate management (Reed, 2002). During the interviews the manager and P4 both likened the booklet to a business card, whilst P1 and P2 consider themselves as middle-management for the group. The rest of the members who attended the conference were given stacks of the booklet to flyer and carry around. Because the booklet can be handed out like a business card, members are encouraged to network and seek out opportunities for collaborations. Thus, it could be argued that it is during the act of distributing such a manifestation of 'a volume of work' that the research group's excellence is dynamically placed into the real world. Individual researcher's social interaction with an external audience may be the only time when the group membership is enacted or performed.

5.5.2 *Visual Documentation*

In the previous sections I have commented on how the quality of research is foregrounded in the process of producing and presenting the blurbs as the booklet's main contents. However, in terms of photographic content there were less explicit criteria from the onset (apart from the requirement that every submission listed needed to be accompanied by an image). As I described earlier, most members of the group have provided photographs that were either produced or sourced online as part of their submissions. These photographs were copied into the shared Dropbox which the senior academics and the graphic designer

can access. I noticed from the final print that some of the photographs members had provided were replaced with photographs I had not collected from the group members. P1 explained that they were edited or changed based on their quality, during an interview after the production he gave a few examples of how different photos promoted quality concerns:

'This one [referring to a photo] was a real annoying one because the image was not very powerful at all. So I was kinda struggling to find better...' (P1)

'Yeah he had a lot in the paper but they all looked a bit like that, like screengrabs. Did you see the video [CHI preview video] for that?'

'No' (P1)

'Coz I told [the graphic design] he could pull...it was in the Dropbox, I said you could go through the video and just pick a frame'

'Ah no we didn't do that, well I didn't know that was possible. (Me: Anyways...) Would have been good to know that.' (P1)

It emerged from P1's selection process that images are not simply illustrative as they are typically regarded in traditional scientific communication. Unlike traditional visual supplements to research, P1 had an expectation for the photos to enhance the message conveyed through the booklet. Looking through the booklet, P1 noticed another image on a different page, and why he wanted to change it:

'Yeah. And I remember I spent a long time, on this page, because it had a - this is why I want it anonymised – [anonymised researcher]'s horrific uh [...] It's too medical.' (P1)

'It's problematic, in the sense that [anonymised researcher] want to talk about [a concept] but'

'Yeah that is problematic. And I was trying to think of an alternative but I struggled' (P1)

'It's just a conceptual question so'

'But then the thing that was here, the [object] was just awful. So we actually got rid of it very early on and we were trying to find an alternative picture in here and we just struggled.' (P1)

Despite P1 having taken more initiative in editing the booklet's contents, there was a real shortage of visual references to help unpack why some photos are deemed not suitable, and bad quality. I was struck by how strongly both P1 and the manager, who seemed

uninterested in the visual aesthetics of the booklet, and never spoke of any visual examples during the production, were invested in how images looked in the booklet. The manager was also aware of the quality concerns for the booklet, I asked him for his view on the role of visual documentation as part of the booklet dissemination:

'Something I came across was, people seem to have different level of fluency about what looks good, and some gives you images where you just think...'

'Yeah exactly. Yeah no it's just some horrible pictures. That's a good thing...I think that's to do with...There's an issue of... Doing this thing increase people's overall literacy, visual literacy even. And I don't think some are like that and some aren't. I think people just need to develop that. And actually if they were thinking they're gonna have to contribute things they should be thinking earlier. So, if you look at [anonymised], who produce these good images, so he's thinking about [project title], and the website, and creates a lot of good stuff' (The manager)

The assertions about the quality of photos expressed by P1 and the manager reflects the way consistency was instilled in the blurbs of the booklet. However, their judging criteria for photos are somewhat opaque from each other's, and to myself. Since there was no concerted effort within the workplace to establish explicit criteria for qualities of photos, why were these senior academics so invested in curating the documentation photos of other members' research? And if the skills in visual documentation can be developed according to the manager, how does he envisage it as part of the existing workplace practice?

'I'm thinking with the CDT [Centre of Doctoral Training established at Newcastle University]³³ we'll think a lot more about this. Have some explicit training and expectation about people documenting their research in a certain way in a certain place. And I think you just got to do that cos it's more modern way. And something like the booklet could be integrated in that. But the group as a whole, it's 60 people, we're not gonna be able to suddenly change the practices. So we might start with the booklet. That would be good'

By proposing to incorporate documentation as part of members' institutional training, the booklet is regarded as a potential vehicle to link the act of producing knowledge to representing knowledge. Whilst the manager acknowledges there are existing practices that members are already engaged in for documentation, the skills could be modernised as new trainee members join the research group. Visual literacy was not the only reason that good quality images were in short supply. In a few instances where members did not provide photographs their reasoning reflected the traditions in academic practices. Some had only

³³ CDT - <https://digitalcivics.io/>

worked on the project as collaborators and were therefore not involved in documentations. Others' conference submissions were brief (one or two pages long) because they are describing pilot studies. In P7 case, there was a shortage of options for choosing appropriate images due to ethical clearance:

'I'm not allowed to show picture of participants and publish somewhere. I'd need to get a separate [ethical approval] (Me: wouldn't such an image be online anyway?) Yeah but I think just to go away from any chance that we might get [fined]. Yeah, we should. I mean we could get copyright but it might be a lengthy process' (P7)

Ethical approval for research projects was a common practice for academics working in areas where they recruit members of the public to take part in workshops, focus groups or experiments. The extent ethical restrictions may apply to an academic project varies, but many forbid recordings of participants to maintain anonymity. However, in P7's case, the booklet provided an opportunity to stage the research process, as I offered to arrange a photoshoot to depict a likely user scenario of the research project which P7 accepted as an illustration of the conference submission.

Through my role of collecting and producing photographs, I located the work of visual documentation as part of research dissemination. Such practice is entangled in implicit and explicit rules that emerged alongside established academic practices which are susceptible to changes depending on the context of research. As part of an institutional practice, visual documentation is regarded by the senior academics as manageable, and a professional skill that responds to modern culture. Unlike the editorial process of the text, photos were given less attention during the production, treated by all members as sub-elements of academic content in the booklet. There is also a shortage of creative license amongst group members in thinking visually about research documentation. This was demonstrated from the onset of the production meeting and interviews with other senior academics focusing their discussions of the booklet's functional purposes for communication research within the academic community and external collaborators.

5.5.3 The Booklet as Artefact

At first glance of the physical copy of this booklet, it appears to be a typical publication. Its print size is A6, but the rest of the print bears very little resemblance to any typical publications. Apart from the front cover showing the name of the research group, there are

no other editorial credits or metadata of the year of the print, publisher or ISBN, however there is a section resembling an editorial page with a message for student recruitment from the senior academics. The freelance graphic designer's name and email is printed on the back cover which is otherwise left blank. Throughout my participation in the booklet production, the decisions that members made towards finalising its contents were based on how well these contents represent the research previously carried out. The booklet, although a bespoke visual document produced by the research group, is rather atypical in relation to other DIY print formats of a similar size or volumes such as zines or pamphlets (both of which are small format prints associated with political activism). Without an explicit editorial team or references to other print media in visual arts, the booklet appears to exist in a network of dissemination that is devoid of visual references except to itself. This highly specialised visual format is remarkably in synergy with the visuality expressed around the 'CHI videos' discussed in the previous chapter. Both the video-making and the booklet production revolve around the academic paper (or other shorter written text) submissions which establish the form and direction of knowledge dissemination and serve as scripts for the performance of the alternative medium of dissemination to perform. As a medium for dissemination, the printed artefact did not engender the research knowledge produced with new materiality or reflect the individual researchers' embodied experience of the individual researchers necessary in producing knowledge. Instead, its production relies for its completion on local politics and routinized work to be completed.

5.6 Reflection on ethnomethodology

The production of a booklet initiated a local submission of materials from members whose work has been peer-reviewed and accepted by a conference. The collection process I took part in updated the research group's collective outputs from CHI2013 to CHI2014. In this instance using the spreadsheet illustrated how group members' research output needed to be tallied-up, indexed and updated regularly. The way different members came to understand the booklet production as routine work also unpacks how senior members adopt managerial tasks based on their tacit knowledge on how to represent other members' research projects. The account I produced shows how research dissemination may be manifested in a print medium. The local production of a booklet therefore materialises dissemination, transforming it from an abstract concept of 'knowledge as distributed' (Thorin, 2006), to 'knowledge as physical artefacts possible to be handed out'. This

materiality reconfigures the knowledge, but it is also altered through the editorial processes that mediate the production of the booklet. The editorial criteria (promoting consistency and 'good quality' visual documentation) developed by the senior academics is part of an evolving process of their managing of other members' work practice. Working with an ethnomethodological framework, my goal was to maintain contact with the dissemination routine within the workplace and detailed instances where members' rationale for going about their routines - what they are *doing* - is made explicit. As a result, I have charted three characteristics of the booklet production. First, I described how the textual content needs to appear consistent, a quality that will allow the group's research outputs to be seen collectively. Lastly, due to the submitted nature of research outputs, dissemination in this format are not creative but rather are indexical, which has an impact on the visuality of the booklet's contents.

5.6.1 *Blind Spot*

In describing the job of collating text and image contents for the booklet production, I have so far detailed my delivery of the task through my interactions with other members. As a participant-observer of the booklet production, learning how to do the job often felt identical to observing how the job was done. On revisiting the fieldwork and the analysis I produced at the time, I unpack the sense of unease during my participation, which, I recall, clouded my analytical insights for some time. In hindsight, I encountered a methodological blind spot and the sense of confusion has to do with the artefact I chose to study. In Riles' commentary on the type of artefact to which the booklet belongs, 'Documents are artefacts of modern knowledge practice, and, in particular, knowledge practices that define ethnography itself' (Riles, 2006, p. 7). Because the focus of my fieldwork was organised around the production of a document, I had anticipated that the production process would record itself in meticulous ways through the emails, spreadsheet files and word files that I collected, not to mention the interview recordings and transcriptions I was producing. This belief that routine work as that which manifests itself in materials designed to keep records of things, meant that at times my reliance on documents deeply confounded the alertness I needed in order to be making a sociological critique of my own workplace. My review of HCI literature suggests that the existing theoretical resources for studying routine work were adequate for understanding any workplaces (Luff *et al.*, 2000). However, studying and asking questions about research dissemination in HCI within an HCI workplace generated an

account of the practice as well as generating its echo. To fulfil a description of the booklet routine, I had to interview the senior members to find out how the booklet's production came to an end. Since my account is not based on first-hand experience and instead it is the senior members' reflexivity that offered insights, how is their reflexive knowledge about the booklet different from my reflexivity as an ethnographer? Or rather, is HCI's ethnomethodology sufficient as an ethnomethodology of a HCI workplace?

Upon reflecting on the 'echo' I recorded from the micro workplace study, I broadened the view on the fieldwork by examining the booklet routine through the lens of critical approaches to developments in UK higher education management, which themselves may be located within the wider debates about 'scientification' discussed in section 2.2.4. Drawing from a performative perspective on professional work, that understand how the self takes on and performs key indicators of identity (Goffman, 2004) , and on anthropological and sociological critiques of audit culture in higher education (Power, 1997; Strathern, 1997; Strathern, 2000), I was able to review my experience and identify the conceptual and pragmatic restraints that emerged during my fieldwork, and understanding their effects. Without negating the original study presented in this chapter, I briefly present them here as additional resources that produce the post hoc analysis. The treatment of ethnography as an academic tradition of enquiry, but one not much utilised in studying academic practices, is particularly poignant as an audit culture penetrates UK universities and as the apparatuses of audit and quality assessment and assurance become routinised academic practices and processes, part of the everyday mundane objects that are no longer examined. I consider that constraining effects of these practices, especially on non-routinised forms of expression, mean that it is an urgent task to learn to work more imaginatively, laterally, and across disciplinary boundaries, even while being trained (or pressured) into producing results for academic, or institutional survival. In response to the theoretical limitations I have highlighted here, I propose a radically different approach to studying dissemination in action in the next chapter.

5.7 Summary

Academic researchers produce ideas that are formulated as knowledge which are then manifested in different media. The demand to disseminate their knowledge means that researchers are mobilised by their own ideas from a local workplace, to conference or

journal submissions, to various meetings and networking events. The production of the booklet wove a diverse group of researchers into a collective by materialising their memberships and networked activities (Law, 2009). Through organising a booklet production, the senior academics introduced a routine of research dissemination in their local workplace. The routine was undocumented, and the study I produced revealed the complex and tacit knowledge necessary for the workers to carry out the routine. The practice of research dissemination studied in this chapter highlighted the emergent nature of membership and research management culture in the workplace, as well as local politics that support routine operations including quality control of research outputs. Although these practices were captured through the ethnography of a document (the booklet), the insights of the researchers themselves could be confused with my own as a consequence of the ethnomethodological nature of the enquiry that I was attempting. I have pointed out the pitfalls of conducting this type of workplace study by drawing attention to the methodological blind spots potentially there in observing one's own academic workplace. Through the interactions between the group members and the booklet, it became clear that audit culture leaves traces or imprints of instruction on campus. The political and managerial focus on the assessed quality of research has had a sustained impact on university workplaces. In the case of this booklet, research dissemination is taken as an opportunity to further enhance research excellence. And although the act of collecting and editing the quality of research may at first suggest an inescapable reflexivity about our own workplace (albeit one infused with local politics and power dynamics), it has kept local ethnography at an arm's length. The resources and strategies devoted to research dissemination through the booklet are intended to better represent excellence, as currently defined by such instruments as the REF, but not to better understand research. As a video practitioner I had anticipated contributing towards a better collective understanding of the visuality of the booklet through engaging myself and my colleagues in its making. However, what I engaged in with this study was not a book-making exercise but rather a book-keeping one.

Chapter 6: Research Fictions

6.1 Introduction

This chapter consolidates the methodological challenges I had thus far encountered in critiquing research dissemination through an HCI workplace, and addresses them. In this final case study, I detail what I term Research Fictions (RFs), which, in the examples presented in this study, are collaborations between myself and colleagues in my workplace. I give an account of the practices of producing these RFs, through extended collaboration in which I worked with the research projects of my colleagues, applying my knowledge as a videographer and visual artist, as well as wider theories and methodologies associated with art practices, to their ongoing work.

Slowly throughout the gap between completing my previous study (ch.5) and planning the next study I began to feel some frustration with the formulaic way of constructing an empirical study and the expectation that such study must necessitate writing that fits existing academic templates (as explained previously, in my workplace, it is usually the CHI paper template). At the same time, I began to develop a feminist positioning more explicitly in my thesis, therefore, when it came to developing the last case study, I wanted to create an explicit feminist critique of the workplace. Subsequently I persuaded two colleagues to take part as collaborators in my attempt to produce a meta study about CHI paper submission. In this sense, this study is more of an intervention in the workplace where the process of constructing an empirical study is 'radicalised' because my collaborators and myself acknowledged that we were deliberately 'hacking' the norms of HCI research, while still attempting to make our collaborations relevant to HCI.

6.2 What are Research Fictions?

Research Fictions draw from feminist critiques of knowledge practices in academia, in order to develop and theorise a performative and narrative form of reflexivity and its effects on practices of dissemination. I term this critical mode of production and reflection as Situated Dissemination (SD), and suggest SD, in the form of RFs or related endeavours, as a novel framework for HCI practitioners to engage with in building reflexive dissemination practice. RFs are an example of how SD might be productively applied as a reflexive practice in an HCI

workplace, and potentially in other academic workplaces. In the next chapter, I discuss SD in more detail; here, I describe RFs as an example of reflexive and creative dissemination practice.

To establish the critical context for developing RFs, and the means by which they are produced, it is necessary to extend current understanding of HCI knowledges in relation to conventional, dominant or accepted dissemination practices. Accordingly, my critique shifts the focus from research outputs to researching as a practice. The creative exploration into alternative dissemination practices, and related questioning of what a paper is through the practice of preparing paper submissions, establishes a new angle for considering what HCI research and knowledge consists of. As established in the literature review, the practice of the production of knowledge (and the visibility and materiality of these practices) is often not considered as significant in HCI. At the same time, visual/material and art-based practices are not understood as having a relationship to the production of knowledge in the context of HCI research. While feminist critiques of knowledge have been enormously productive, there is still a 'blind spot' in terms of the overarching framework of the academic paper in HCI, and how it is constructed.

In this chapter I extend the critique of the dominant and conventional dissemination practices in the workplace by proposing a performative, embodied framework for critiquing and experimenting with dissemination practice on the local or micro scale of an HCI workplace. In doing so I draw from theories of performance and art practice (Phelan, 2003; Bial, 2004; Schneider, 2011)

6.2.1 *Productive Critiques*

I describe the process of making RF in a collaborative manner with fellow PhD students at Open Lab. The intention of these collaborations is to productively critique and question dominant or conventional dissemination practice in the workplace. I use the term RFs to refer to the artefacts produced via my collaborative processes. The RFs are not intended as a new format for dissemination itself, but rather should be seen as responses, through a practice of making, to the limitations of routinised forms of dissemination (as discussed in chapters 4 & 5). RFs also address knowledge dissemination practice as embodied, something that is often absent in routine dissemination. I conclude this chapter by proposing a theory

of situated dissemination in the workplace that develop a framework from RFs as a model of reflexive practice.

These engagements constitute attempts to address the materiality of research practices, and in particular, to expand the ways in which reflexivity is currently understood in feminist HCI and Research-through-Design discourse. Through engaging participants in thinking about alternative dissemination practice, the RFs developed as a feminist approach to producing dissemination artefacts that re-enact normative elements of routine work in order to provide opportunities for self-reflection and critique. The making of RFs focus on normally undocumented processes of research carried out by individuals within the research group which are not regularly disseminated through existing research publication artefacts (e.g. paper, videos or booklets). I focus on two case studies of RFs collaboratively produced with colleagues at Open Lab. These RFs were themselves materialised (one as a video installation and the other as live performance) but were not aimed at publication in academic venues, or other institutional channels of dissemination. As such I do not consider RF to be another publication track, or as an alternative to traditional means of academic publication. RFs serve a different purpose in the production of academic research, which is to engender further reflection and critical thinking on dissemination practices both in individual cases and concerning the wider discipline. In addition to the two case studies presented here, I also discuss other attempts at broadening an exploration of dissemination practices, and point out the challenges and pitfalls of engaging in alternative dissemination practice.

6.2.2 *Response to Methodological Challenges*

As discussed in chapter 5, dissemination is organised as routine work in the research group and such academic practice appears to be immune to examination from within the group, as exemplified by my discussion of the missed opportunity in addressing the limitations of the CHI booklet as a medium of dissemination. This immunity demonstrates the lack of visibility dissemination has as a practice, both on an institutional (workplace) scale, and on the scale of individual research outputs: both are unable to see the effects of mechanisms of dissemination and their processes on research culture and production.

The ethnomethodological approach to observing dissemination practice provided me with insight into the scale and scope of knowledges produced and disseminated through the

workplace. My position as an ethnographer and student in the research group meant that participation in routine work such as making CHI videos and CHI booklets needed to meet the expectation of the senior academics who manage the group. Adopting an ethnographic perspective allowed me to observe instances and produce records of the local routines performed by my colleagues to ensure that dissemination practices meet the ACM CHI conference quality standards. However, such participation in the workplace was limited in part because I was only able to gain access to existing production of dissemination artefacts. Although I was able to reflect on the visibility and materiality of videos and booklets through their production, it was difficult to initiate critical dialogues with colleagues during the making of these artefacts. In retrospect, I became aware that my attempts to introduce visual provocations to routine tasks in the workplace were regarded as problematic and disruptive, especially by those senior academics who organise the routines. As I have alluded to in the previous chapter, this resistance to intervention is largely due to the external pressure on the research group to perform excellence in research. As a result, Open Lab members have adopted effective ways of organising research projects and their subsequent dissemination; the group routine institutionalised HCI disciplinary standards of dissemination created by the ACM group. The benefit of such institutional practice is that it allows a diverse group of researchers to adopt the same routine and templates to communicate their work, and in turn many diverse topics are written up, and presented as a coherent volume of work in HCI.

I explain the difficulty this presented me with as a practitioner embedded within HCI, and following an ethnomethodological approach. In the booklet study, I had attempted to practice my approach through integrating into existing dissemination processes in the workplace. I had hoped that this would allow me to produce critiques of these processes, and to demonstrate both the critique but also to offer an alternative practice for dissemination. However, I underestimated the entrenched resistance to critiques of dissemination practices in the workplace, and the 'blind spot' when it comes to addressing the nature of dissemination practice. As I discuss in chapter 4, the visibility and materiality of knowledge is still marginalised in HCI and there is far from a common understanding of how these knowledges relate to normative dissemination modes.

It was important, therefore, for me to develop an alternative approach that could more immediately draw attention to what I see as the need for greater reflexivity in the production of research within HCI. In developing this discussion of the need for reflexivity I focus particularly on the impact of feminist HCI dissemination practice, as this is the sub-domain most closely aligned with the principles of my own creative practice. In following the feminist HCI agenda and Haraway's critique of science (Haraway, 1991), I sought to investigate how we could better construct research narratives that foreground embodiment and avoid neglecting the situatedness of conducting research in these domains. To gauge how I might engage others in conversation about our existing dissemination routine, I organised a series of informal consultations with fellow members (academic staff and PhD students). These consultations were initially follow-up group meetings of the booklet study where the participants reflected with me on the impact of a paper-oriented routine of dissemination, and the relationship of individual research projects to a wider group. As well as writing up a report of the booklet study, I began to develop a framework focusing on elements of research that are not typically written-up and disseminated through academic papers.

6.2.3 *Feminist HCI and Feminist Practice*

I discuss in the literature review (Chapter 2) the ways in which feminist approaches to knowledge have been incorporated into HCI and have engendered novel and critical challenges to the discipline. These challenges serve to allow for multiple and varied experiences and understanding of research, and have been influential in setting out and elevating socially-engaged research forms, as well as more reflexive practices in the production of research. I draw attention to the wide range of HCI academics working with feminist ideas and texts and applying them to their ongoing research projects within the discipline in varied and productive ways. This body of applied thinking can be broadly referred to as 'Feminist HCI' (Bardzell, 2010). Rf's are inspired by this tradition and take many cues in their development from the application of feminist theories to ongoing research.

However, I also illustrate that despite the broadening of approaches and reflexive practices within the discipline, the discipline itself acts a restriction for the implementation of feminist practices through the mechanisms of its dissemination culture. Practices surrounding

publication, format, venue and discussion of work through the dominant culture of research submissions serve to limit the applicability of feminist practice to HCI. Much of feminist practice is not concerned with, or is explicitly opposed to, the production of singular knowledge or hierarchical forms of knowledge production. The dominant dissemination format within HCI, however, is still entrapped in these modes and regulated and maintained by many vested interests as I have discussed. It is important then to make a clear distinction between Feminist HCI and feminist practices within HCI. The former accounts for a growing body of knowledge concerning feminist practices that has been published within HCI and so *permitted* by the discipline. The latter is the wider application of feminist practices and approaches to research in HCI. Some of this work may not be published or accepted in existing dissemination formats. Instead, it is a practice, a mode of operating as a feminist within the discipline.

RFs belong to this latter approach and so do not explicitly seek permission to be published as academic research within HCI conferences and so on. Instead, they are an attempt to engender feminist practices within the production of research. This research is typically ongoing (as was the case with the examples presented in this case study) and heading for its own academic venues and dissemination formats. RFs do not aim to interfere with this process; they are intended to bolster it and allow greater reflexivity onto it through the making visible, and material, the means through which knowledge is produced. A key strategy attached to RFs is in the application of critical theories from art practice, particularly performance artwork and studies. Feminist practices in art and performance are not restricted by the same disciplinary conventions as those within HCI. Strategies of re-enactment performed by feminist practitioners in art allow for critical reflexivity of our approaches to knowledge and a greater understanding of how we go about producing it. Importantly, from my practitioner-perspective, feminist art practice elevates the status of the media used, so that the medium becomes one of the principal points of discussion when critiquing and contemplating work.

6.3 Embodied Reenactment

In this section I explain how as a visual artist I draw from performance artworks and performance studies as both inspiration for my own practice, as well as tools for thinking around and developing the concept of research fictions.

Institutional practices of dissemination as demonstrated to me by Open Lab, and particularly through the booklet study, generally lack the capacity to accommodate critical discussions around the medium of dissemination as part of their dissemination practices. As a visual artist and practitioner, I seek to reconnect visual and material thinking with knowledge dissemination practice. Drawing from my experience of supporting my colleagues' visual documentation in the workplace, I pay special attention to the dissemination practice of Feminist HCI. This is an area where despite a strong critique of many of the processes involved in the production of knowledge, and dissemination practices relating to this, there is what I have identified as a lack of consideration of the role of visuality and materiality, in part a consequence of dominant dissemination practices that do not consider these significant to research production.

To help illustrate this, and start to develop RFs, I first had to assess a degree of critical interest amongst colleagues by engaging them in conversations about the visuality and materiality of dissemination, and the significance of these aspects of research. Building from the workshop session 'provocations' I detailed in chapter 4, I moved to a more intense form of ethnographic participation in the workplace, not as a participant-observer, but as a participant-performer. In developing these new, performative provocations, I draw from performance art and performance studies, a body of work that has directly informed my visual practice. To unpick dissemination practice performatively, I first initiated a series of informal conversations with Open Lab members. These conversations took place during coffee or lunch breaks at the office and were intended to identify potential collaborators in the research group. My aim was to find colleagues with experience in producing academic papers using the ACM templates, and with an interest in alternative ways of producing accounts of their research projects. To initiate discussions of alternatives to the ACM templates, I used visual references such as Cindy Sherman's photography as a talking point to help me explore whether colleagues at Open Lab had considered the limitations of traditional dissemination practice within HCI.

6.3.1 *Reenactment in Performance*

Sherman's photography [Fig. 8] is often described as performance and this is largely due to the subject matters she presents in her imageries. She draws heavily from phenomenological

practices in the arts, a movement that gained particular prominence in the 1960s among artists, in which artists developed work that drew attention to the body's relationship with its surroundings. Combining this with a feminist approach to subjectivity, she produces work that challenges the idea of a single viewpoint for art criticism:

'Drawing on feminism as well as phenomenology, I also suggest here that Sherman's work participates in a particular mode of performative artistic production typical of post-1960 body-oriented practices: a mode in which the subject of making is enacted through representation rather than veiled as in the modernist project. This mode proposes a new relation of artist/viewer engagement that might be linked to the phenomenological idea of the chiasmus: the way in which embodied subjects intertwine through the regime of a visibility that itself turns the world into flesh. That is, while one subject sees another, the subject in seeing is also seen and so made flesh' (Jones, 1997, p. 33)

Sherman's images are often composed as scenes of theatrical re-enactment; her images evoke a sense of 'have I seen this before?'. The mise-en-scène in Sherman's works is often familiar, reminiscent of settings in the popular media genres such as TV and films. From domestic rooms to dystopic wastelands, Sherman poses in her own photographs and transforms her own body through costumes and prosthetic body parts. Through these scenes of reenactment, the artist's body performs and transgresses several boundaries including those of the artistic medium (i.e. still photography becomes performance), gender and social identities.

Sherman's work was particularly challenging to photography, as it transforms the photograph from a seemingly straightforward object into something much more complex:

'Krauss allows that photography's emergence as a "theoretical object" (that is, a deconstructive tool) had already occurred in the hands of Benjamin in 1931 in his "A Small History of Photography." It is in the 1960s, however, in the critical mix that included Barthes and Baudrillard and others, that photography fully exposed itself as a medium of undoing - undoing mediality, undoing verity, undoing art. As a multiple-without-an-original, and yet an object with a resilient link to the bodies and objects it cites (what Barthes terms photography's "that was there" aspect), the photography as copy marked, in Krauss's words, "the site of so many ontological cave-ins.' (Schneider, 2011, p. 164)

Schneider explains how Sherman's practice in photography can be considered performance, and what the photographs re-enact:

“Sherman shoots her photographs as portraits – she poses, that is, for her own camera. The record of Sherman’s live pose is, of course, the photograph. But the photograph is also not only the record, since it is the reenactment itself, for it is through the material support of the photograph that the reenactment takes place as performance: the performance takes place as photograph, and in this sense might be considered redocumentation as much as reenactment, troubling a distinction between the two. This is to say that the photographs themselves (not just the actress/photographer) reenact film stills, reenact oil painting, and mimic other media as if standing in their footprint, tracing their form.” (Schneider, 2011, p. 154)



Figure 8 & 9. Stills of the same composition by Cindy Sherman (1981) and a Japanese male artist Yasumara Morimura (1998).

Practices such as Sherman’s generate a set of readings and questions around the status quo of photography, and transform a reading of the photograph into a reading of reenactment. What is of particular interest to me is how the medium itself is unchanged despite the new critical approach we take to it: the photograph is still a photograph. I draw from this pioneering work in the arts a set of implications or strategies for critiquing the way dissemination practice in HCI lacks an embodied consideration of knowledges. Even if the paper format does not change, it would seem that a process of reenactment is able to help us understand and see the ‘performance’ of its production in a new light. This lead to a question - how could re-enactment help to expand on issues of dissemination practice, especially for feminist HCI? Schneider explains the nature of making re-enactment in relation to feminist critique:

‘Indeed, it would be possible to argue that “reenactment” has a profoundly feminist history, and to explore how its genesis as a site of fascination in the art world, has roots deep in the work of feminist artists and scholars who began to think of the body as stage, and in so thinking, began to wrestle productively with precedent by performatively replaying gesture, act, scenario, and image for criticism and revision’ (Schneider, 2011, p. 227)

Sherman's practice of self-portraits represents a performative approach to reenactment and the implications of her work circulate not just in the arts, but among anthropologists and sociologists in relation to such issues as the representation of the female image. However, the intention in introducing her work in relation to RFs is to focus on the practice of 'doing' reenactment. I suggest that it is only through practice that reenactment achieves its full capacity for questioning the status quo, in ways that are currently unavailable through ethnomethodological enquiry.

6.3.2 *Reenactment in Documentary*

There is a rich array of female performance artists/photographers who experiment with their own bodies and thus allow and encourage the viewers to question assumptions and social stereotypes (such as Jo Spence (Spence, 2003)). As discussed in Chapter 4, Hito Steyerl is an artist whose work I draw on, as her video artworks often directly critique the very medium of video itself. My first attempt to use Steyerl's reflexivity in her work 'Strike' was a way of promoting discussions in the workplace about materiality. This met with limited success, perhaps because screening artworks during the office lunch hour had a limited impact on an academic audience unfamiliar with engaging in the materiality of video art. Unlike the performance photography in Sherman's work, Steyerl's videos often direct viewers' attention to the medium itself, and the narratives in her videos tend to tackle the politics of digital image circulation.

Like Sherman, Steyerl's practice is poignantly feminist in the sense that her video usually features herself as a subject in the digital image manipulation she effects, making her presence a double, both as the questioning person and the questions presented. In 'Lovely Andrea' [Fig. 10], a short documentary film, Steyerl takes a trip to Japan accompanied by a cameraman. She appears to be setting out on a quest to look for archival images of herself when she posed as a bondage model. Her trip led her to visit studios and workers in the bondage industry in Japan, and it is these encounters that the film moves in and out of focus on. As a viewer, the world of bondage-image industry is casually visible as well as Steyerl's perspective of her own return to Japan. The film allows the viewers to engage in reflexive questioning of the female body in bondage photography in the past, but also draws attention to the documentary-in-the-making with Steyerl in front of the camera. Such duality of presence is a recurring theme throughout Steyerl's work and illustrates a form of

embodiment of one's own critique. Indeed, video as a medium is generative of multiple narratives which may exist simultaneously without conflating the different strands into a singular message. According to Olivieri's thesis on feminist documentary film making:

'Lovely Andrea is then, to a certain extent, a documentary film that reflects on its own artifice. Moreover, it plays with the questions of visible and invisible, power and submission, sexuality and female bodies, economical needs and state control, disciplining and non - hegemonic codes and desires, transnational and intercultural movements of images and people, and alternative and political approaches to images and realities' (Olivieri, 2012, p. 6)

While in 'Lovely Andrea' Steyerl does not replay her past experience as a bondage model, the film looks back in time to allow the current examination of a variety of global issues such as female bodies and power. It is important for the audience to believe that Steyerl had been a bondage model, and that the visit to Japan re-surfaces her modelling experience, so that watching the film the viewer appreciates that Steyerl is performing a reenactment of her bondage experience in a documentary. To use her own body as a stage that was manipulated, without necessarily acting out the manipulation live, makes her performance more segmented by comparison with Sherman's photography. In the next section I demonstrate how one can utilise video as a medium to contain several layers of meaning, making it an effective choice for a research fiction.



Figure 10. A still frame from 'Lovely Andrea' (2008).

The works of both Cindy Sherman and Hito Steyerl are situated within a rich tradition of female performance artists whose works are currently untapped resources for the development of an HCI discourse on feminist research dissemination practice. The works I point to in this chapter are particularly important in inspiring the framework of making research fiction and by introducing reenactment as an artistic strategy, I want to make explicit the 'how' of making research fiction, not as instruction, but as a reflexive account of how, as a visual artist, I arrived at a series of creative decisions during my collaborations. These artists' work illustrates the potency of theatrical reenactment as an artistic strategy to engage one's own body in an intensified, exaggerated form of critique of status quo. As a participant-observer at Open Lab, I was a student who carried out routine tasks of dissemination, whereas by provoking questions about those routines, I became a performer who intentionally found ways to make routines visible, through collaborations with fellow members also engaged in the same workplace routines. In the next section I explain how I located my own subjects of mimicry or pastiche in popular media and art genres as templates for myself and my collaborators to reenact elements of research dissemination practices in HCI.

6.4 Making Research Fictions

In this section I describe how I engaged two fellow PhD students in collaborations that involved the reenactment of aspects of their ongoing research projects. I detail how we were able, as HCI practitioners, to approach the subject of dissemination practice performatively through replaying normative research routines and gestures. The result of these collaborations is two instances of making research fictions. In this section I place equal emphasis on the production of the RFs as on the final artefacts. These artefacts were a short video uploaded to YouTube, and a live performance held at an artist gallery in Newcastle. I draw attention to the impact of performing reenactment on knowledge dissemination practice and highlight the materiality of such practices. In the preparation of making research fictions, I organised ad-hoc meetings with colleagues to ask about their personal experiences and informal views of Open Lab's dissemination strategies around the CHI conference. This informal approach helped to tackle the methodological challenges and inherent difficulties in studying one's own workplace routines. The work of Sherman and Steyerl laid the foundation for the concept of research fictions, however it is through deliberate provocations during those informal conversations with colleagues that a working framework of research fictions emerged.

Drawing from my own video practice I utilised my freelance videographer position to introduce artistic dialogues with anyone interested in reconsideration of dissemination strategies in the workplace. These conversations resonated strongly with the insights I gathered from the focus group on CHI video (in chapter 4). Throughout these provocative conversations in the workplace, the most frequently recurring topic was the way in which embodied experiences are abstracted or treated as mundane details and discarded in the process of preparing material for dissemination. As an example, a colleague discussed a research trip to rural settings where researchers' clothing suffers from wear and tear and is exposed to unpleasant odours from farmyard activity, yet these effects—the embodied experience of the research trip—were never discussed as part of the research. Many research projects involve events such as workshops which require considerable preparation, and typically researchers find themselves not only preparing conventional research content for dissemination but also having responsibility for the social aspects of an event such as hospitality (organising catering or bringing food and drinks). They print out university documents (information sheets, consent forms, receipts and so on), and run 'house-keeping'

tasks during workshops, while at the same time engaging in sometimes highly sensitive conversations with participants. In other words, this mixture of mundane or routinised and intense or personal experience is an aspect of preparing material for dissemination that many HCI researchers would recognise. However, the laborious processes and the physical materials involved in doing this work tend to disappear from written accounts of the research projects, and yet those processes were essential to the research. Many colleagues acknowledged that they omit seemingly mundane details in order to emphasise knowledges that can be generalised and disseminated further within the academic community. By doing so, a paper submission also carries with it its “production value”, offering transferrable knowledges produced locally to a global audience through international conferences such as CHI. This kind of self-editing is a seemingly essential component of dissemination practice. RFs address this by drawing attention to these practices and reenacting them in order to understand the nature of this editing, and its effect on the subsequent research as published.

Using reenactment as a strategy to examine routinised dissemination practice, the creative task I set for myself and my collaborators is to tease out and re-play familiar gestures in research and dissemination while experimenting with possible alternative ways of disseminating our embodied reflections on our experience of reenactment. Seeking collaborations means that there are many more failed or aborted attempts than ‘successes’ where my collaborators and myself were able to successfully conceptualise and produce research fictions. I held many conversations with colleagues which started to develop but were restricted or did not go further for a range of reasons. However, I believe that the framework for RFs demonstrated through the projects that did develop further is broadly applicable to research projects within HCI. That is to say, I argue that research practices or projects are not excluded from becoming an RF due to some essential component of their nature; RFs are a collaborative, practice-based methodology that can be applied to ongoing or completed projects, as I explain in more detail in the following chapter. The description of the two collaborations I present below is a partial account of how the research fictions emerged as ‘completed’ from my own creative practice perspective.

‘Media reviewers oversimplify the symbolic function of the work of art. Academic critics err in the opposite direction, treating the work (whether performance, painting, video or sound composition) as a cryptic panacea for a culture’s ills. The

net result is the same: under-interpreted, or over-interpreted, the meaning of the artwork is detached from the matrix of its production. In this context it's not surprising the when scrupulous (or busy) artists tire of trying to explain what they do and fall back on the worn-out trope of letting the work speak for itself. This is doubly unfortunate, as it perpetuates a Romantic myth about the creative process – that it cannot stand up to rational enquiry – and (while admitting that the products of material thinking can 'talk') cedes the terms of the debate to outsiders. The 'creative process' is not in the least mystical. The decisions that characterise it are material ones, and a good techne, or craft of shaping or combination, has to be open to criticism and correction.' (Carter, 2004, p. xi)

6.5 Research Fiction 1: Get Ready With Me – In the Bathroom (GRWM)

The first research fiction was produced in collaboration with Teresa Almeida, a fellow PhD student at Open Lab. Entitled 'Get Ready With Me – in the bathroom (GRWM)', this research fiction took the form of the production of a short online video [Fig. 11] (<https://youtu.be/1HgZdDoxv5w>). Upon completion, it was exhibited as a video installation as part of the British HCI conference in Lincoln, 2015 (Chen, 2015)

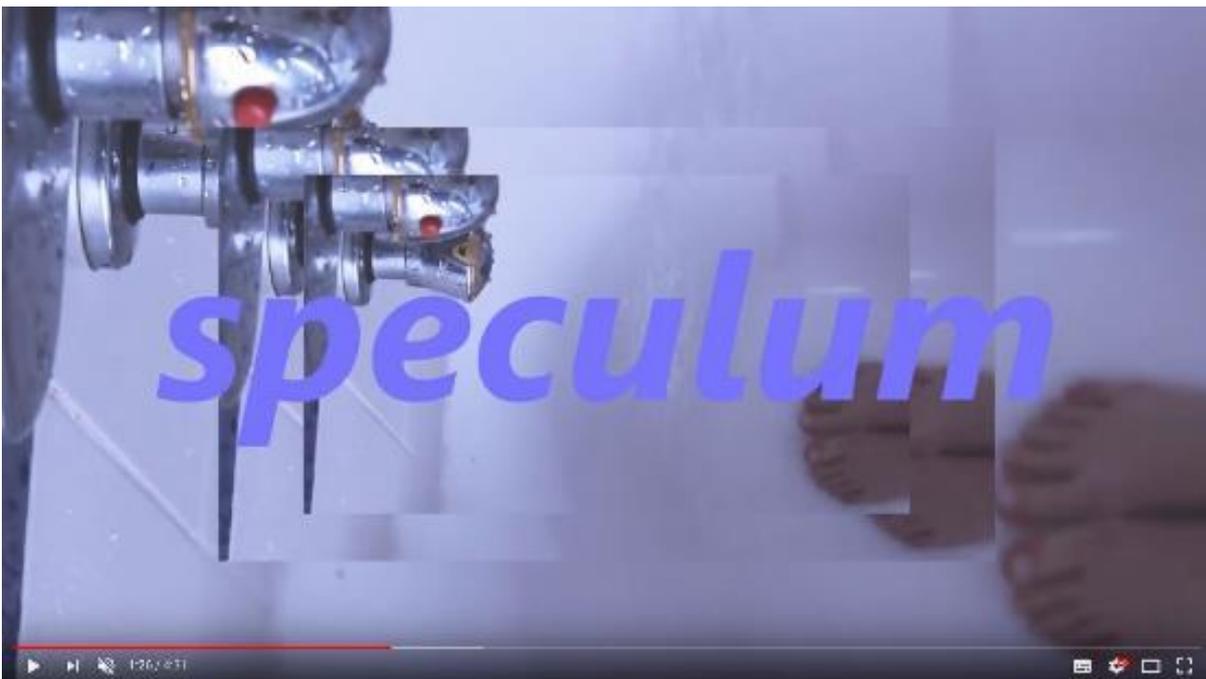


Figure 11. A still from the GRWM video. Photo: Ko-Le Chen

6.5.1 Background

Prior to making the research fiction I was a long-term collaborator with Teresa on the visual documentation of her design research and my photography regularly featured in her publications, personal website and press releases. Both of us joined the research group as PhD students at the same time and shared the same office. Over the years, filming and photography have become regular occurrences in Open Lab and I frequently received

requests to support colleagues in these forms of documentation. Some of my previous training in media arts and theatre (as described in chapter 3) have influenced the aesthetics of the visual documentation I created, and it is through working with colleagues who acknowledged and are interested by my aesthetic, such as Teresa, that I began to recognise it myself. I became more conscious of the kind of photographic and film techniques I was using, and the resulting aesthetic of these techniques. In documentation of research projects, I would often use close up shots, ambient background noise, and voiceover to create what I considered calm, clear and authentic depictions of my colleagues' research. I have always tried to incorporate interviews with the researchers which are quite loosely structured, allowing researchers' to talk openly about their work. Based on my exchanges with Teresa over aesthetics we developed a collaborative partnership, in which I became her photographer and videographer of choice when it came to disseminating her research, and the partnership provided numerous informal opportunities for me to observe dissemination practice in-situ. As practitioners, we shared a background in media art, and in drawing from feminist and performance art to inform our research. As a colleague, I have always been particularly inspired by Teresa's hands-on ways of working with wearable technologies and she would often share her experience in researching female intimate care (Almeida *et al.*, 2016) and the challenges she faced in disseminating her work within the HCI community. Photoshoots or filming with Teresa mostly took place in our open-plan office where there was plenty of natural light and communal space that we could arrange as ad-hoc studios. There were also several memorable trips off-campus when I attended her workshops to document the events. One of these workshops became particularly interesting and allowed me to begin to conceive of the idea of critiquing dissemination through making an RF related to it.

In 2015 I was invited to take part and document a women-only workshop Teresa was running. The aim of the design workshop was to explore alternative designs for the speculum, a research interest of Teresa's. I was able to attend the workshop both as a documenter and participant. As a participant I was encouraged to reflect on my personal experience in clinics with the current speculum design. This was a speculative design project motivated by feminist concerns, addressing taboos directly and challenging current practices in the medical profession. The speculum has its own cultural history, and one that has been challenged in recent years. I recall having two very eventful days meeting other female

participants who came from different countries and very different cultural backgrounds but sharing similar stories of encounters with the speculum at female healthcare clinics. As well as being a participant, sketching design ideas and discussing these with other participants, I also photographed the event. This was a particularly rich experience as the conversations amongst the women were personal, intimate, funny and challenging.

As a result of the intimacy of this workshop, its subject matter and the conversations with the participants, I felt rather attached to the project and kept an interest in it. However, later in the year when I asked Teresa how the speculum project was going, she told me she had to drop it because her supervisors were concerned that the direction she was taking was not relevant to HCI. This was perhaps an unfounded concern, given the recent prominence and success of the Yona Care product³⁴ – a digital speculum device devised by a group of feminist researchers in the USA.

Several months later, Teresa asked if I could work on an intimate photoshoot with her to create images of a prototype underwear she was developing named Labella. Since Labella involves augmented underwear paired with a smartphone app, I suggested that we shoot the photos at my apartment where there was ample natural light and privacy. When Teresa arrived she announced that she had just received peer-reviews of a paper about a different prototype she had designed. As she started to strip her clothing for the shoot [Fig. 12] we lamented over the peer-review comments in a familiar ritual among academics. I recall her saying that one of the peer-reviewers wanted to know ‘where the battery is?’. With a weary smile on her face, we both understood that such comment was not unusual and exemplifies ongoing debates within HCI regarding the scientific status of the discipline (Reeves, 2015a). The concern with the operational functionality of the design, rather than its social role or cultural significance, directed the line of questioning for Teresa’s reviews.

³⁴ <https://yonacare.com/>



Figure 12. Image from the photoshoot in my apartment's bathroom. The same image appears as in Teresa's publications, featuring the prototype 'Labella'. Photo: Ko-Le Chen

Because of these setbacks, and a sense that it was a struggle to find a suitable audience for feminist projects and discussion within the context of the workplace and the wider HCI community, Teresa was open to the idea of developing work with me that would try to address these concerns. Together we started producing a RF that wasn't seeking an audience so much as starting a conversation about the difficulty finding appropriate audiences.

6.5.2 Making Process

As a starting point for a reenactment-based process of developing the RF, I asked Teresa for permission to access the audio recordings and her notes from the speculum workshops. I proposed to draw from the materials she provided to make a short video. My focus for the video was to address the conflict of interests between aspects of research dissemination embedded in HCI, and the embodied experiences I recalled from being at the workshops myself. Teresa offered me the creative license to develop a script for the video based on her research and the workshop recordings. It was important for me that this video wasn't using data, in the form of Teresa's audio recordings and notes directly as part of the RF. Although part of this was for ethical reasons, I also felt it was important the RF video wasn't a

straightforward reproduction of elements of the research groups that had already happened, but a creative reenactment of these events. The fiction aspect of RF here serves as a useful distancing tool, allowing a reenactment to operate more like a staged theatrical work inspired by events rather than accurately recreating them.

I started by integrating elements of the real workshop experience with my own reflections on the challenges of feminist dissemination practice. The video would be a nuanced way of addressing the challenges and resistance Teresa and I experienced in research dissemination. I felt that as a participant in the speculum workshops I had ownership of my own voice as captured by the recordings, but also a sense of responsibility to the other participants to find a platform for their discussion of the speculum design. As such I was disappointed that the project could not move forward because of the conservatism of existing dissemination practice at our workplace. I scripted conversations based on the recorded discussions amongst participants at the speculum workshop, and developed a monologue narrative inspired by the day and perhaps in a tongue-and-cheek way, vagina monologue (Ensler, 2007). The resulting script features a fictional female persona—a character loosely based on myself—being confronted with the idea of herself being distributed as research knowledge. She is contemplating questions about the meaning of consent while presented with a consent form whilst recalling memories of visiting a health clinic.

In developing the script, I wanted to present the video that it would be developed into in a style that was familiar in popular media. In searching for a contemporary medium in mainstream culture I paid special attention to digital formats online. There are many online video genres that involve a monologue (or first-person voice-over). One of interest to me within the YouTube sphere is a genre of videos named 'Get Ready With Me' (GRWM), usually featuring a woman who narrates her daily routine of getting ready for the day. In mimicking a popular video format from the commercial platform YouTube I sought to make the quality and style of the RF distinct from typical research videos, and seemingly targeted at a different audience. This was in order to make the critique more visible – the video doesn't fit within academic conventions of dissemination, and so become an incongruous artefact in relation to Teresa's research. As such, the narrative it conveys takes

a different tone to dissemination; the GRWM format gives a sense of familiarity to the video which in itself is disconcerting given its academic context.

6.5.3 *Installation*

The resulting RF video feature was a seven-minutes-long film, depicting a female character (portrayed by my friend Julia Miebach) seemingly going through her daily routine at her apartment while my voice-over plays her internal monologue contemplating the workshop. The video does not show her face clearly, and uses close-up shots and cutting to give her anonymity. These techniques were chosen to draw attention to the anonymous role of the workshop participant. In a typical GRWM video, the central figure would be prominent and talking directly to the camera. By creating an anonymous figure, but using similar filming techniques, cuts, and editing patterns as a GRWM, I intended to draw attention to a sense of the uncanny in the video; the workshop participant as an anonymous presence in this research document.

The video features my voice as the voice-over, notionally a spoken or internal monologue delivered by the actor featured in the video, engaged in reflective self-questioning over the workshop. This monologue re-enacts and synthesises the multiple voices of the participants, retelling the womens' stories I heard at the workshop. She thinks about becoming anonymous as part of the research. As we listen to her thoughts, and watch her get ready, we understand the workshop as simply an event in this woman's day, not as the focus of it, but as something that has lingered in her memory for a while. She has clearly slept on it and woken up thinking about it as she gets ready. In creating this situation, I wanted to draw attention to the embodied, human presence of research participants and their everyday lives. The RF focusses on communicating these qualities of her character and placing into the background the research content she was involved with.

The video closely mimics the technical and aesthetic qualities of the YouTube genre while replaying conversations from academic workshops. Although this workshop was not itself filmed, as academics we are familiar with the ways in which workshops such as this one are typically disseminated via film. I have produced many films of workshops both for records for the academics involved, and for dissemination of this research. In combining these two different practices of film making I highlight the distinctions between the two practices.

Although the media are the same, there is a gulf in the different practices of film-making applied here. Taking a genre as familiar and culturally entrenched as the YouTube GRWM mode, with its tropes and qualities, demonstrates an immediate sense of video practice that one does not always appreciate when watching academic videos designed for dissemination. Thus, academic videos can no longer be seen as neutral instruments for the depiction of research when crossed with this film practice.

YouTube as a platform of video streaming is often produced by amateur videographers, but can also involve a larger production process that is hidden behind the scenes. The most popular video-makers on YouTube have millions of subscribers and generate significant revenue through advertising income. This allows for the production of high quality, heavily-produced videos on the seemingly 'amateur' platform. I was keen to utilise the ambiguity of this platform and the GRWM genre to experiment further with the notion of fiction in the video. By adopting the aesthetic of this 'semi-professional' genre, I wanted to take a position in between a depiction of the reality of the situation and a fictionalised account. In this way the genre reflects my handling of the voices captured from Teresa's workshop. Rather than use them directly as data, I edited them into narrative form in the guise of a script, in order to experiment with the relationship of fiction to research outcomes.

Through this RF the rich data produced in Teresa's workshops, while struggling to find an audience within the HCI workplace, is translated and performed through a critical reenactment. This reenactment allows us to see the research differently, and the agents it involved such as research participants. It uses fiction and narrative techniques to overlay onto the research the aspects of it that are concerned with social and cultural associative practices, but often absent in dissemination practice in HCI. In doing so it draws attention to the way in which conventionally disseminated research, especially in the form of videos and concerned with workshops, edits out embodied experience and other qualities of a research project and focusses instead on illustrating outputs and other metrics.

Teresa and I exhibited the video RF at the British HCI conference as part of the Interactions Gallery in 2015. This gave me an opportunity to collect thoughts and feedback on the video from HCI academics and colleagues. There was a positive response and it engendered conversations on ethics and workshops, which encouraged me to continue working on RFs.

6.6 Research Fiction 2: Inflatable

The second research fiction was created in collaboration with Matt Wood, also a fellow PhD student at Open Lab. Entitled '*Inflatable*' [Fig. 13], this research fiction was the production of a one-off live and public performance (lasting approximately 30 minutes) that took place at the NewBridge gallery, an artist-ran collaborative in Newcastle's city centre. A more thorough documentation of this RF can be viewed on my portfolio online³⁵.



Figure 13. A still image from the video recording of the live performance of *Inflatable*. Photo: Ko-Le Chen

6.6.1 Background

Following the exhibition of GRWM at the British HCI conference I returned to the workplace with more confidence and with constructive feedback on my new approach to critiquing dissemination practice. As I continued to search for collaborators within the research group, a colleague recommended Matt and I approached him immediately at the office. As a fellow PhD student Matt joined the research group in a different cohort and I had not had the opportunity to work with him on visual documentation. However, I discovered that Matt was an amateur stand-up comedian who is passionate about performance, and that his PhD

³⁵ <https://kolechen.me/2016/08/22/inflatable/>

research dealt with teenage sexuality. Matt mentioned that he had recently organised a series of workshops with teenagers using blow-up sex dolls [Fig. 16] as part of a body-mapping exercise. To illustrate how I initiated the conversation about making research fiction with Matt, I list two entries from my research diary after meetings with Matt. Although these texts are not intended as step-by-step records of how the research fiction 'Inflatable' was produced, they provide a sense of how the collaborative relation between Matt and myself developed, which was crucial to making the final performance possible.

15/03/16 meeting note:

'We arranged to meet and look at photos from the dolls workshops, so I picked up Matt from his seat and we found the meeting room to be empty. He brought his ACM formatted paper and made a start by showing me the feedback he got on the paper (DIS submission). The paper received varying scores from the reviewers and they made similar comments on the "representativeness" of Matt's result. The fact that the paper was rejected on the grounds that its contribution wasn't 'scientific' enough, was something we both felt that's what the reviewers really think. It isn't explicit, but reviewers expressed a need to see something universal from the work, something that would "really tell you what teenagers think about sex". There're a lot of textures and sensorial experience in doing the dolls workshop, but it's not easily conveyed in an ACM paper. Because of the ethical constraints, none of the images included in the paper show participants' faces. But that left the paper with just pictures of the blow-up dolls. I explained the notion of "enacting" reflexivity and making it part of a knowledge dissemination practice, and how my practice is informed by feminist artists, theatre studies/performance studies. And how I felt that there's not enough art being referenced in HCI. And as an RtD project, what I would get from making these case studies with video as an artefact of the reflexive practice.'



Figure 14. Photograph taken by me during a production meeting. Photo: Ko-Le Chen

15/04/16 meeting note:

'Since our last meeting Matt started adding stuff to the Pinterest mood board and I've been checking them out absent-mindedly while on holiday in Asia. This was my first day back in the office, having only arrived yesterday I felt quite under-prepared, but the feeling was quickly gone when we sat down. We looked through the pins and Matt explained why he dropped them in. I was really impressed by the rich visual language the whole mood board presents. It started off with images of clowns embodying various characters and methods. Also since we mentioned the possibility of a live event, there're also images of different theatre spaces, including operation theatre. Obviously still linked to the blow-up doll workshop, where Matt and his participants were looking at the doll as a body.'

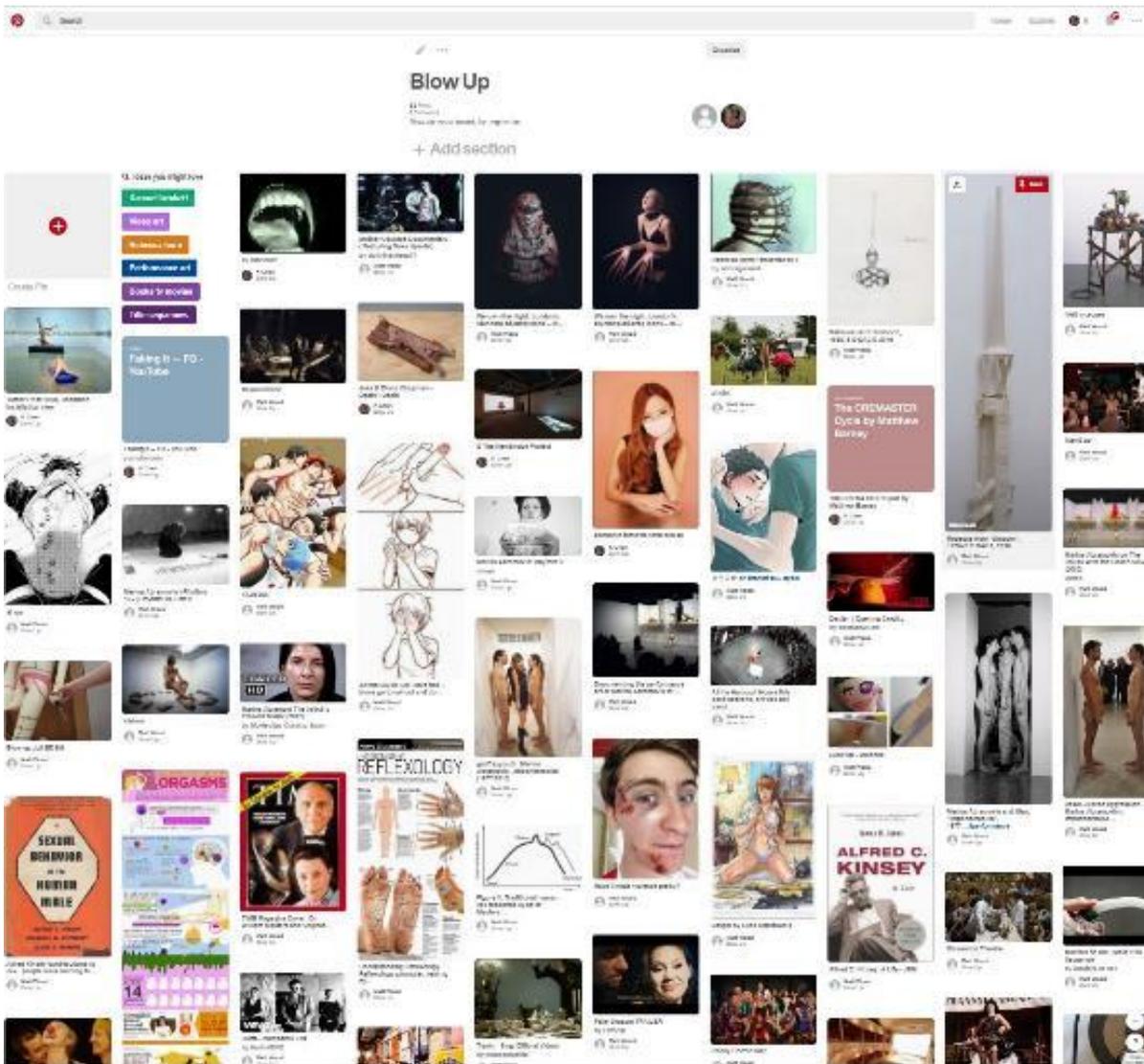


Figure 15. Pinterest mood board that Matt *and I* populated with sketch ideas for ‘inflatable’.

I illustrate and describe these meetings here to illuminate our creative process in the production of this RF. Although Matt and I had not worked together previously in the lab, we were able to co-develop and start producing the RF through an intuitive and predominantly visual process. This loosely structured process illustrated to me a rich seam of potential creative collaboration available in the workplace that can be mined through seemingly impromptu discussion about research projects and allowing for different creative approaches.

6.6.2 Making Process

By the time I asked Matt if I could see the blow-up dolls he used in his workshops, they had been scrunched up in a plastic bag and stored in an office supplies cupboard for many months. As a starting point of reenactment, I suggested that we could think about a story

where the blow-up dolls are performed in a fictional workshop setting, with Matt communicating their relationship to the research project they were once part of. It became apparent in these conversations that such a story could be told effectively through a performance. The performance took three months to develop, as we both felt ambitious about what we could achieve. I suggested taking on the role of a producer to ensure that a final performance event would take place. By taking on this role (a role familiar to me from my previous theatrical experience as outlined in section 3.2.1), the development for Inflatable became more systematic, and I devised a production timetable and was responsible for the budget for the production. Drawing from reenactment, my focus for the production was to engage us both in a creative process that examined the nature of dissemination in HCI and also to construct situations where the omissions of an embodied experience in routine dissemination are made visible.

We listened to the audio recordings [Fig. 14] from the workshops and commented on the textures of ambient sounds, such as teacups clattering from the catering trolley, and Matt's slightly monotone way of speaking to participants when asking them to fill-in consent forms, an affected tone that he was not particularly conscious of using, but clearly different from his normal speaking voice. (For examples of similar sound art practice see (Weiss, 1996)) These experiences, where we revisit Matt's research data (which are not captured in a paper) helped to unpack our own experiences of conference submissions performatively. Drawing on the precedent of collaboration with Teresa, I was confident that engaging Matt as a new collaborator would lead to a different type of reenactment, and so a different format of RF, while maintaining a critique of dissemination. Our collaboration made progress as many theatre productions typically do: Matt as the performer experimented with ideas at his leisure and demonstrated them at our production meetings, whereas my focus was on understanding how we could use theatrical techniques to draw attention to how our workplace's routine dissemination practice impacted on the way the blow-up dolls workshops were transformed into writing and disseminated as research knowledge. Matt and I challenged each other in the ways we conceptualised the blow-up dolls as important artefacts of his research, and proposed many different approaches for the reenactment of the dolls as part of the performance. Matt also had what could be described as an online feud with the ACM CHI women's committee, regarding the dolls' presence at a conference. This developed because some conference attendees had encountered an empty room where

Matt had left his body-mapping workshop materials, including the blow-up dolls, and took the liberty of sharing a few selfies and uploaded them on social media. The attendees had considered the props a joke, or something they could make humorous through staged posing, which caused a small outcry when shared on social media because of the inappropriateness of their actions. Unfortunately for Matt, he took blame for some of this activity, despite the focus of the workshop and not being involved in this way. This small episode is a disheartening glimpse at behaviour around awkward subject matters in HCI, that make attendees feel uncomfortable and act inappropriately. In some ways it reflects the earlier issues with Teresa's research on the speculum not being deemed suitable for HCI; there is a potential shortage of research in the field that makes people feel uncomfortable, and so when it emerges, it can be treated with contempt.



Figure 16. Photo of the blow-up dolls, with Matt and I next to them. Photo: Clara Crivellaro

As we explored the possibilities of a live performance, the anecdotes that Matt shared became more revealing of the uneasy interface between his experiences of research workshops and academic dissemination practices. We used this unease to discuss the parameters of the RF during production meetings, and focused on the potential of the RF to

illustrate issues of dissemination practice that have a limited capacity to accommodate sensitive subjects that require necessary reflexivity in researchers' accounts. The RF became a lens through which the nature of sensitive subjects and their relationship to research dissemination in HCI could be critiqued through a performative practice of reenactment. Since Matt is an amateur stand-up comedian, he took particularly well to the idea of semi-improvising a monologue to tell the stories about the blow-up doll workshops he had organised, while my contribution was in helping to design the stage for performance, including sound, lighting, and the reclaimed blow-up dolls. Once again, data from the workshops was not used directly, in the sense of voice recordings and so on, and again while this was partly for ethical reasons, the fictional nature of RF is critical to the work. By improvising and constructing the performed workshop, we are able to see it as both a performance and reenactment, rather than an attempt to copy and repeat a previous event. Although the Open Lab office has public space where the lab hosts talks for visitors, we were both interested in exploring other public spaces, and especially arts venues in the city centre. It was important to create a physical distance from our workplace for the reenactment, since a 'real' workshop could easily take place at our office, and many do on a frequent basis. As such, a performed or reenacted workshop needed a venue that didn't communicate it was a research environment. For us, a public art space gave the opportunity to think about the performance as an art piece, rather than a piece of research. As with the GRWM RF, by blending genres and mixing academic practices with practices from a different field (in this case performance and public art), the RF creates a critical framework through which to observe academic practices as non-neutral events. The reenactment needed a radicalised dimension in which the authentic and the pastiche can be presented with equal footing:

'Performance art usually occurs in the suspension between the "real" physical matter of "the performing body" and the psychic experience of what it is to be embodied. Like a rickety bridge swaying under too much weight, performance keeps one anchor on the side of the corporeal (the body Real) and one on the side of the psychic Real. Performance boldly and precariously declares that Being is performed (and made temporarily visible) in that suspended in-between.' (Phelan, 2003, p. 167)

The city centre location also meant that we were more likely to attract casual audience, rather than just people invited to the show through the workplace. Both audiences were treated equally, and there wasn't one interpretation of the work designed for the academic

audience, and one for a public audience. Instead, the idea of a workshop as part of conventional academic practice was performed and critiqued through the RF.

I had previously organised a film-screening event at the NewBridge Gallery and suggested to Matt that we could go and take a look at the space. We were greeted by the gallery's director, Charlotte, who met with us and offered a gallery space that could be available for two days in June, 2016. This meant that we were allowed to load-in and run a dress rehearsal before the public performance.

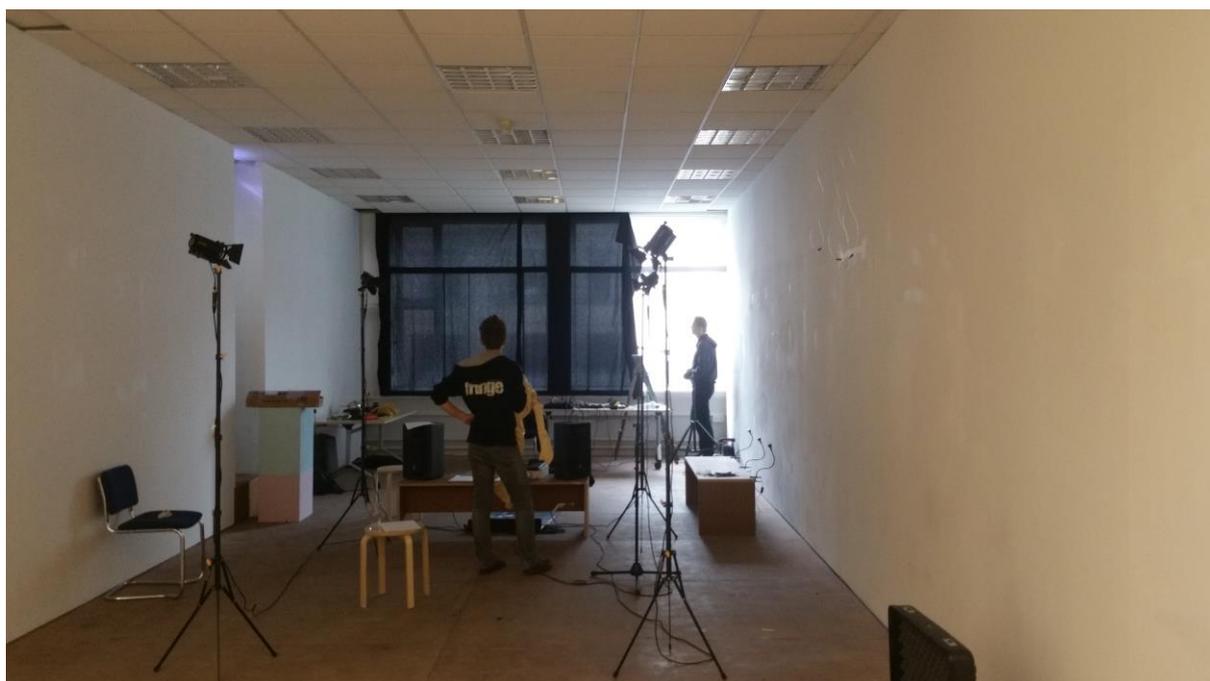


Figure 17. The performance venue of Inflatable at NewBridge gallery. Photo: Ko-Le Chen

6.6.3 Performance

In the final one-off live performance, Matt stood in front of a crowd of approximately 60 people (including many colleagues from Open Lab but also members of the local artist groups and larger public) and performed a heightened re-enactment depicting the running of a workshop on sexuality with young people. The performance blurred the experience of the workshop and its participants with the experience of viewing the event, and included involving members of the audience as participants in the event, in a time-honoured tradition of stand-up comedy. In the gallery we produced soundscapes reminiscent of office ambient noise, the clattering of teacups, and so on, carefully producing an event mixing elements of theatre and comedy. Particularly effective, and interesting from my perspective, was Matt's permission – and enthusiasm – for the inclusion of peer-review comments on his research

proposal into the milieu of the audio soundscape. At the end of the show, a crescendo of voices read out online comments around Matt's research, immersing him in audio recordings of criticism directed at the research Inflatable was based on. This performed reading of peer-review criticism, usually a private communication between researcher and reviewer, was transformed into an exaggerated, public, theatrical moment into which the researcher and audience are immersed. For Matt, and other members of the audience who are used to the routine of peer-review and accompanying criticism, there was, I believe, a sense of catharsis in this embodied and exaggerated reenactment. Peer-review is a vital and instrumental mechanism of dissemination in HCI, but the experience of hearing reviewers is often muted into a routinised set of actions, part of the give-and-take of academic publishing. In theatricalising the review, and making it public and exaggerated through echoing, repeating voices, this process becomes material and manifest, its emotional and resonant qualities unsuppressed and brought to the fore.

As with the RF I produced with Teresa, we had many positive conversations and feedback from colleagues who came to the performance. The event prompted me to think about the ways in which these two RFs were connected and situated by the research they are related to.

The decision to perform in front of a public audience was a decision made by Matt and myself as producer and performer. From the onset Matt was keen to use performance to address elements of his research. And making a 'show' as the final outcome of our collaboration became an agreement which helped to sustain our conversations about academic templates. As an ethnographer, I offered my creative support in exchange for Matt taking part as collaborator in critiquing the academic paper. Rather than taking the public audience as an opportunity for data collection, I simply viewed the publicness as a creative element that was promised and crucial for the final show.



Figure 18. Event flyer for 'Inflatable' designed by myself, using visual elements from Matt's workshop documentations.

6.7 Summary

Through making these research fictions I explored the boundaries of established dissemination practice within the research group, and their relationships to the larger HCI communities and venues. This approach to critiquing existing practice was only possible through collaboration with fellow members, whose experience I was able to draw from to create case studies of HCI dissemination practice. Instead of using a conventional ethnomethodological framework to study local practices of dissemination, I drew from visual artworks and performance artworks and performance theories to make embodied connections between researchers and the researched.

Producing these two performative accounts of research unpacked and built upon the position I had previously adopted in doing routine work such as filming colleagues research projects, and it allowed me to reflexively critique my own assumptions around documenting research projects at the workplace, as well as assumptions my colleagues make about the role of, for example, video in relation to research projects.

Additionally, the RFs incorporate Teresa and Matt's encounters with the materiality of the knowledges they produced. My contribution here was to aid them in reflecting on the material, embodied practices that are implicated in their research projects. Through provocative intervention into their dissemination practices, and the application of a feminist lens to these means of dissemination, I was able to guide and collaborate with them on these reflexive processes.

6.7.1 *Encountering Situatedness*

One striking aspect of the RFs, and a potential reason for their success as collaborations with Teresa and Matt, where other attempts at collaboration were less successful, is related to the source of a desire for collaboration coming from a sense of disappointment or disillusionment with the academic peer-review process. Both Teresa and Matt had had research papers rejected because their work was not seen to fit within the constraints of dissemination in HCI as organised and operated through the CHI framework. While there were many reasons why such work might not be successful within this framework, the opportunity I initiated through collaborations on an RF was not as an alternative research output, as with the submission formats for design-oriented research such as RtD (Jarvis *et al.*, 2012). Instead, the collaboration produced an opportunity to reflect on the production of the research and create a situation in which the agents involved in its production, and its dissemination, could be brought into view. This was done through reenactment and allowed both researchers a sense of 'completion' in the arc of failed research outputs, and perhaps more importantly an opportunity to think about the research in new and productive, reflexive ways.

These RFs are not created to replace Teresa and Matt's publications or other dissemination artefacts. Nor are they a tokenistic gesture towards how to 'do' diversity in the institution. Rather, my concerns in making the RFs were to elicit reflexivity in myself and my collaborators, enabling the unpicking of the mundane tasks involved in research projects, and thus highlighting that however mundane or routinised the tasks of HCI research may be, they often involve and engender necessary sensitivities and produce embodied insights. The RFs, heavily informed by art practice, are obviously provocative or even subversive acts within the context of this routinised knowledge production. However, as I discovered during my ethnomethodological research in Chapter 5, this is necessary in order to draw attention

to seemingly neutral or routine practices in the workplace. The contribution I am able to make with colleagues is therefore an encounter with their situation as researchers, and the material and embodied practices that they are performing everyday in the workplace. By drawing attention to this situated form of knowledge, I collaborate with colleagues on situated forms of dissemination which are concerned with the qualities of research that dissemination omits.

The limitations of the CHI paper format in accommodating embodied knowledges were made visible through the process of producing and performing RFs. Therefore, a critique of dissemination is also a critique of knowledge, and engaging in making research fictions necessitates attention to the materiality of knowledges.

6.7.2 *RF as Critique of Dominant Dissemination Practices*

Despite the increasing number of HCI projects that deal with intimate contexts (such as female care and sexual health), very little has changed in terms of dissemination formats to accommodate the requirements of such projects. Rich data and the knowledges produced are reported and disseminated through notionally neutral imagery and language in order to qualify as research contributions according to existing academic standards. Building on Teresa's personal experience in conference submissions, I was able to question dissemination practice in action and reveal the potential harm it may do to projects such as Teresa's PhD. Current dissemination practice demands the foregrounding of established practices in research papers while personal experience, such as that recorded above, tells us that gaining 'rigour' often means omitting the intimate and nuanced aspects of research findings. This of course does not mean we write misleading accounts of research, but rather that, in the HCI community, there are currently no spaces for an embodied discourse on situated knowledge. It is important to find formats and venues for these insights accommodated and developed by researchers if not in publication, through performance, installation and other practices.

While my co-authors and I may already interpret these Research Fictions very differently, it is important that the concept of RF and RF's utility as a practice is considered. I want to be explicit in stating that neither of these research fictions are considered publications of research in themselves. They are 'self-published' collaborations, and I view them principally

as sense-making devices that me and the collaborators are able to re-visit at a later date. They are also prompts for continuous reflection within this thesis on the types of knowledges that are produced through them that might otherwise elude publication formats. Both pieces are principally intended as examples of what I term situated dissemination practice, in which the work requires and seeks an audience in order to make the research practice 'visible', but doesn't pre-empt or contrive to generate an audience through a process of submission or a focus on a submission venue. Instead, the audience, and nature of the research fiction, are themselves generated as part of the dissemination practice.

By extending current understanding of HCI knowledges in relation to conventional, dominant and accepted dissemination practices, my critique shifts the focus on research outputs to researching as practice. The creative exploration into alternative dissemination practices, and the questioning of what a paper is through a paper submission, establishes a new angle for considering what HCI research and knowledge consists of. Each of my case studies has explored dissemination as a practice in the HCI workplace. In the next chapter, I describe in more detail a theory of Situated Dissemination, and discuss its utility and purpose as a reflexive dissemination practice.

Chapter 7: Towards a Situated Dissemination Practice

7.1 Introduction

In this chapter I review my experience of conducting the case studies described in chapters 4, 5 & 6 and also set out the insights these studies generated. I discuss these insights and the challenges and pitfalls I encountered during the process of studying dissemination in my own HCI workplace in sections 7.2-7.4. This discussion is structured into two main sections. In the first section (7.2), I discuss dissemination as a routine practice and the challenges this brings as a subject of academic study and critique. In the second section (7.3), I discuss reflexive practices and their current usage, and restrictions on this usage, within the context of my workplace. Following this in section 7.4, I theorise the outcomes of the case studies presented in this thesis as what I term a practice of Situated Dissemination (SD), and summarise this practice, which I offer as my original contribution to research into the HCI workplace. This theory of SD collates and combines an approach derived throughout the three case studies in my workplace, and allows me to offer a useful approach to the discipline that goes beyond the walls of my own workplace.

I conclude in section 7.5 with a breakdown of how these contributions act as an extension of feminist critiques of scientific objectivity, representation, and ethnographic approaches as they are currently utilised in the field of HCI. In 7.6 I look to future work and where this research might lead me, as well as how it might hope to inform future research in HCI. Finally, in section 7.7 I provide a reflexive account of the production of this thesis, and document and discuss my struggles as a feminist practitioner in the HCI workplace.

In chapter 4, I approached first-hand experience in video-making with HCI researchers as a participant-observer and explored the ways the CHI video, as a conference submission format, is conceived by fellow researchers. The focus groups and surveys I organised as part of this work teased out the qualities of video-based dissemination that are known to and utilised by HCI researchers as an effective medium of communicating research within HCI, while also delineating the limits of this knowledge and video practices that are less well known or understood to HCI researchers.

In chapter 5, I described an ethnographic study of dissemination practices in the workplace through my participation in the management and production of a document of research outputs. This fieldwork allowed me to document a regular event that required the organisation of dissemination as a group activity. My involvement as a participant in the practice of dissemination developed my ethnographic approach into an ethnomethodological one, as I worked with colleagues to produce the booklet. The study revealed and recorded the level of co-ordination required amongst group members and the management of research groups in the production of and representation of knowledge. It also made clear to me the limits of an ethnomethodological approach in which I worked 'on behalf' of the workplace, and led me to develop a means of bringing my practice further into the workplace.

Lastly, in response to my ethnomethodological approach to unpicking dissemination practice and the constraints on unpicking materiality through practice that remained within that approach, I developed a performative approach, based on feminist principles in art theory, allowing me to reveal and critique dissemination practices as described in the RFs of chapter 6.

The discussion in this chapter focuses on answering the research questions set out in Chapter 1 (and repeated for ease of reference below), relating it to the overarching question at the centre of this thesis: How is research dissemination currently understood as a practice in HCI? Section one will address the first two RQs, and section two the third. Section three, building on responses to the RQs, develops a theory of situated dissemination practice as an applicable methodology for the HCI workplace.

RQ 1: Why is it important to study dissemination practice?

RQ 2: What are the ways to study dissemination as a practice?

RQ 3: What are the implications of critiquing dissemination for the future of dissemination practice in HCI?

7.2 Producing Critiques of Routinised Dissemination

From asking questions about videos, producing summative research booklets, and developing performative reenactments with colleagues, the study of dissemination practice

in my workplace was only possible because of the events that signposted that dissemination was itself 'on-air'. This sense that dissemination was a subject that was starting to broadcast its significance was based on the often dynamic and novel ways that HCI researchers have been communicating their research to the wider academic communities that they belong to. This notion gave me the opportunity to engage colleagues in conversations about the future of dissemination in HCI, and to work with them to better understand how dissemination communicates their research to the wider community.

7.2.1 RQ1: Significance

In regard to RQ1—why is it important to study dissemination practice—the routinised aspects of dissemination practice emerged over the course of my case studies as problematic and in need of further understanding (Martin, 2011). In chapter 4 I highlighted the means by which conference submissions are recognised as a process and as important steps for academics at all levels to articulate the knowledge that they have produced through their research. The video workshops and wider surveys of the HCI community show that researchers in the field are concerned with how effective media such as video can be for communicating their research to others, both academic and wider public audiences. They highlighted a notion of the image as illustrative of a research output, and not necessarily a central aspect of a research project, with the video sometimes developed after the research has been completed, as a way of disseminating it to a broader audience in what was sometimes referred to as a form of 'marketing'. The relationship of video to normative modes of academic dissemination was unclear or invisible to many researchers, and the utility of video as part of a research project was also in question.

On the other hand, what is increasingly obvious, including to the participants in the workshops in chapter 4, is the proliferation of video as a medium for communication within HCI, through the development of new calls for CHI tracks (for example the video preview submissions discussed in section 4.5.1) that demonstrate a desire within the discipline to make more use of it as a format. This new prominence, contrasted with a seeming lack of clarity about its role, and particularly its relationship to established modes of research dissemination, is relevant to understanding why it is important as a subject of study. In particular, as these new tracks and the adoption of video into HCI become more widespread, they will themselves become routinised. This routinisation of video submissions into forms

held at arms-length from normative research dissemination could create a hiatus in any understanding of them as a potentially integral element of research processes.

In chapter 5, the importance of studying routinised dissemination practice became more obvious. Senior academics, in their role as managers within the institution, emerged as key interlocutors for communicating the qualities of research to stakeholders, academic peers and potential collaborators across the discipline. This management of research is an integral part of academic practice, but its mechanisms and their effects are not always clear to researchers. As I witnessed, and participated in, in the booklet study, the means through which research of a group is collated and disseminated can follow methods and unwritten rules that are not obvious to researchers within the group. This can create confusion among members as to the nature of what such routinised disseminative activities are for, and who they benefit.

From the ethnomethodological account of dissemination in the form of the booklet, I developed a micro view of the way research quality was performed. The analysis of the study alerted me to a certain methodological blind spot, in the sense that academics' account of their research was not seen as an instrumental aspect of the research itself. Instead, a management layer has emerged that is routinely curating and accounting for research projects in order to find wider audiences and further investment in the work. This essential practice is in part a response to the structuring of organisations such as ACM CHI and their funnelling of research, and researchers, into industrial production capacities. The close relationship of industry and academia highlights potential problematics when it comes to the routinised dissemination of a group's research. Industry, in the form of extremely large and powerful corporations in computing such as Google, Facebook and Microsoft, are principally researching to offer a better product, and one that belongs to the company. The individual researcher in this context is part of a hierarchical machine, and is managed accordingly in order to develop projects to the benefit of the corporation and its shareholders. This hierarchy is not a natural element of academic practice. The implementation of managed research groups in HCI, and their cohabitation of influential venues for the dissemination of research through the ACM CHI group, demands some scrutiny.

While neoliberal policy is creating a more managed research climate across university sectors (Burrows, 2012), HCI has a particularly close relationship to industry, and has arguably moved more quickly than other sectors into this kind of positioning. At the same time, companies such as Google and Facebook are coming under increased scrutiny around ethical issues in relation to how they use and distribute information on individuals, what their social responsibility is, and their cultural roles as influencers. These companies are actively working to develop HCI as a field whose research becomes accessible to them. It is important to establish a framework to understand how routinised practices that occur in the workplace of an HCI research group in a university setting are influenced by outside interests such as industry, as well as by policy developments that reflect economic priorities and seek to capitalise on research. The micro-scale study of managerial practice in relation to the routinisation of research dissemination in chapter 5 gives an impression of a wider malaise that needs attention.

In raising the need for a new framework for an ongoing questioning of routinised dissemination, we can understand that discourse on knowledge is also a discourse on power structures. Understanding who is knowing not only reveals intellectual agency, but also the mediations that take place between knowledges and the knowers. By reflecting and unpacking dissemination practice in our workplaces, we may be able to reveal more about what actions take place in the production and representation of research towards paper submissions. As such, a theory of situated dissemination needs to account for and establish power relations in existing dissemination practices. This will include critiques of scientific dissemination practices that stem from objective knowledge. SD emerges as a productive way of critiquing the status quo in academia, focusing on the professionalised and routinised work present and underlying academic life.

7.2.2 RQ2: Methods

In response to RQ 2, I have sought ways of doing this research that make dissemination observable, with this in turn helping to make the abstract notion of knowledge production and dissemination visible in the site where it takes place. Through the focus on artefacts where research knowledge is manifested and distributed, I generated means through which dissemination could be seen and considered as a sited, material and visual practice. The key to the ethnographic participation in the case studies of chapter 4, 5 & 6 was to recognise the

practices that my fellow research group members were engaged in when producing dissemination artefacts. The challenge here is in the resistance to close scrutiny that routinised practices and forms of knowledge production generate, especially for members who are deeply enmeshed in these routine practices. As a practitioner coming from a different research background, and with a practice-based methodological approach, I was able to more easily identify routinised practices among my colleagues than they were able to themselves. In this way I made the familiar strange, the historic role of the ethnographer and ethnographic practice.

To theorise a process of critiquing dissemination practice is to find a working framework so that typical conceptualisations of research dissemination can be challenged and further unpacked as practices in themselves. In the course of following research events, through collaboration as colleague and videographer/photographer, I was looking for signs of dissemination in-situ. I noticed in this early work that it is often seen as an abstract notion that is internalised by academics, both junior academics and more senior colleagues. Therefore to address dissemination as a practice is to tackle the immediate resistance of that internalisation of work practices and their consequences. I found a means to counter this resistance through pointing out the hidden or overshadowed qualities of knowledge production through its materiality and visibility; to treat dissemination as the production of research artefacts.

By focussing on the material and visual qualities of dissemination, I was attempting to engage colleagues in considering the forms knowledge takes, and to tease out the relationship between their research ideas and the material forms these ideas are disseminated as. This had mixed results as demonstrated in my account of the workshops I ran with colleagues in chapter 4, but did engender conversation about the materiality of knowledge which was extremely constructive in understanding how many colleagues understood dissemination practice. This material approach, engendered by my methodology, helped me develop an approach to studying dissemination practices in HCI which I further developed in chapter 6.

Chapter 6 demonstrates the utility of performative practices as a method of studying and critiquing dissemination in the workplace. This methodology of performative reenactment,

with a material and visual approach applied from feminist and critical art practices, is an important aspect of SD. By performing dissemination practices, and reenacting them, the workplace of knowledge production becomes a site through which to interrogate existing practice. This kind of engagement with research practices is not common in HCI research, in part because it is not yet clear in disciplinary terms what such engagement offers, or what academic venues exist for it. However, the RFs developed in this case study give as an example approach a means through which dissemination can be critiqued and reflexively acted upon. This reflexive approach to one's research practices is a core feminist principle and I would argue an essential aspect of knowledge production. SD has a responsibility to further develop opportunities to encounter reflexivity and situate oneself as a researcher, practicing research and disseminating it.

7.3 Encountering Reflexivity at the Workplace

What does being reflexive about research dissemination entail? In section 3.3.1 I discussed an anecdote about my colleague being concerned about me doing a PhD from my desk and I argued that an academic environment such as a computing science research lab is considered a sterilised or neutral place, which is not of particular consequence to the research produced 'through' it.

In this section I address, through examples in the case studies, how we can attend to the seemingly mundane aspects of an HCI workplace. The motivation to claim reflexivity in doing and disseminating my own fieldwork, via a critique of the dissemination practices of others, came from insights gleaned from the booklet production in chapter 5, and discussions with colleagues such as the ones I recount in chapter 6. The resistance I experienced in the booklet production from senior academics to embodied knowledges being incorporated in this process disabled for me an active position in critiquing and offering insight. As a result, I became more interested in reflexive practices, particularly feminist approaches to research in HCI.

Feminist HCI has become a domain that represents issues of diversity, reflexivity and methods in the HCI community. The way these topics are dealt with are often through articles submitted to and published by academic venues, which in-turn deliver a peer audience for the topics to be heard. In the third-wave HCI discourse, feminist scholars joined

in to become a valuable addition to the discipline. As I discuss in my literature review, feminist HCI scholars drew in particular from Haraway (Haraway, 1988) and standpoint theory to empirically critique dominant forms of scientific knowledge in the realm of science. Haraway has informed us of the limitations of objective science and research, and there is now an extraordinary resource within HCI that has developed into intermediary forms of knowledge such as the 'annotated portfolio'. Similarly, STS scholars, and Bruno Latour in particular, draw out the underlying problems of objectivity by informing us of the assumptions we make when constructing papers and other submissions.

As HCI researchers, this knowledge implicitly criticised modes of working that are held within the same discipline as the feminist scholars. However, this means that forms of suppression in HCI research, made visible through feminist HCI projects, were dealt with within the existing discourse structure that HCI allows for as a discipline. The issue here is that HCI, constructed on foundations of scientific knowledge, does not necessarily allow for reflexive thinking within the constraints of its disciplinarity:

'we demanded inclusivity from systems of selectivity, we sought equality from orders of ranking, and we fought for parity in economies of scarcity. And when we felt the effects of institutional exclusions, inequalities, and disparities, we did what the self-reflexivity rule said we should do: we debated our positionalities and practices within feminist studies without acknowledging that they, too, were the effects of trying to operationalize our discourse within the academy's rule-governed routines.' (Messer-Davidow, 2002, p. 213)

7.3.1 RQ3: Implications

Feminist HCI research is deeply relevant to my RQ3. By proposing a situated dissemination practice, I aim to inform current feminist practices in HCI that they too are structured by the academic routines set up by the discipline since its inception. Broadening our understanding and applications of Haraway's project could enable researchers to stretch their reflexivity muscles further.

Bardzell describes the qualities of being reflexive in research:

'Research should be characterized by ongoing self-questioning about whether the research is delivering on its ambitions to be feminist, improve human quality of life,

and undermine rather than reinforce oppressive social structures, etc' (Bardzell and Bardzell, 2011, p. 683)

Here the authors highlight the importance of acknowledging societal issues while critically reflecting on the researcher's own positioning - to be aware of where we sit in relation to the subject matter we are applying our research to. Thus, the framing of reflexive practice is premised on researcher-participant relations. This is particularly relevant for design-oriented research in which proposals are generated in response to participants' perceived needs. But there are pitfalls in organizing reflexivity around the researcher-participant, that are not always accounted for when reflexive practice is structured in this way. This in turn is linked to how reflexivity is currently understood in, or within, HCI literature. Haraway's situated knowledges has strong purchase for reflexive thinking and pertains to the ways dissemination could be organised as a practice.

An example of my reflexive approach in this thesis can be seen in my reflection in chapter 5, where the booklet study revealed that an ethnomethodological approach drawn from previous practice in HCI may not itself be sufficient as a methodological tool to study HCI knowledge practices. The same challenges lie ahead for feminist HCI, where the reflexivity proposed by feminist scholars may have failed to engage actively with the very structure feminist HCI scholars are attempting to critique.

Feminist scholarship, in any discipline, risks being subsumed as an additional intellectual entity – a subdomain in an existing framework – and its full power as a challenge to established or accepted modes of thought is thus muted. While many believe that this is better than not being included at all, there is a need for a debate that has yet to take place within HCI by feminist HCI practitioners. In opposing the use of feminist thinking to paper over oscillations between sub-disciplinary divisions, Strathern suggests that Kuhn's notions of paradigm shift as a way of explaining major changes in scientific approaches may not be so applicable in the case of feminist theories:

'Rather, the key lies in the social constitution of the disciplines and of feminist scholars- in how the practitioners relate to their subject matter, and consequently the structure of their discourse' (Strathern, 1985, p. 7)

Markham commented on the 'black-boxing' of research:

'Although methods texts offer extensive descriptions of how one might design research questions, collect data, manage and sort data, and apply analytical tools to this data, much of the actual process from data to conclusion remains a black box. Most often, especially in disciplines where interpretive reflexive inquiry is not taken for granted, these processes are not included in anything the audience might read. Instead, we see the tidied-up version of a long, messy, creative process of sense-making'. (Markham, 2013, p. 65)

In practicing reflexivity towards the conceptualisation of formats of dissemination, we are helped to acknowledge power and the structures that tend to dictate our thinking about outputs. Often in qualitative research a researcher is expected to conduct fieldwork which generates data, which are then processed through different forms of analytics before writing up and submission to academic journals or conferences. In reality, this oft-recited cycle of research is a fairly abstracted, streamlined and post-rationalised version of complex network of activities.

Clarke et al articulated their reflexivity through practice, in the writing of their paper in which the use of a first-person account is made explicit and linked strongly to the methods and principles they were working with (Clarke *et al.*, 2016). This approach embeds the author and allows readers of the research to understand the relationships being discussed. But it is a technique that can be easily lost in the vast quantity of academic papers being published constantly in HCI. They also argue for being critically open, not stubbornly insisting on occupying a single perspective. Of course, it is not only feminist-informed research that deals with these questions, but user-centred, participatory design, and experience-centred design also do so. This questioning is ongoing and well-considered. However, there are limitations for constructing reflexive accounts of non-objective knowledge, which may-or-may-not fit the existing protocols. At the forefront are situated knowledges, which are still generally required to be documented in text form, and that try to communicate technical practice from multiple standpoints. The academic paper, from this perspective, as a dissemination format is, in itself is a restrictive device on reflexive practices.

7.3.2 Utility of Art Practice to SD

How might this SD approach be developed, working in a genuinely interdisciplinary way, such as through the combination of feminist HCI and Research-through-Design frameworks, or even further afield, through a feminist HCI supported or accommodated by reflexive critical art practices such as performance theory? What could a reflexive account of research

in this mode look like? One possibility is in the setting of a new reflexive research agenda that would allow for ideas to be communicated in new formats that reflect the set of sensitivities that the agenda introduces. This is part of the ambition of a SD approach.

As HCI researchers, we may be able to build on subversion by engaging in institutional practices such as paper submissions while engendering our workplaces with alternative, reflexive dissemination practices. I argue that subverting dominant protocol can take place but that it is difficult to detect the 'performative scripts' that we are adhering to, as they are often routinised as everyday actions in the workplace. However, we could deliberately disrupt these protocols, creating opportunities that allow us to examine these routines. The SD proposition responds to existing work in HCI by acknowledging that rumination on academic practice as such would not be possible without the active debate within feminist HCI, conducted amid the pressures of mainstream HCI research. That is to say, SD could not exist without feminist HCI as a basis from which to build this approach. Performative practices such as those documented in chapter 6 go some way towards developing reflexive strategies that escape disciplinary constraints. In this way, they are interdisciplinary activities, and SD approaches should maintain an aspect of this way of working. Reflexive accounts can generally only function within the restrictions of the discipline they are operating within. This is partially the problem of feminist HCI, and in a sense any feminist sub-discipline. SD aims to challenge this by not operating solely within one discipline and set of restrictions, but fluidly merging approaches from distinct disciplinary practices.

For this reason the practical element of SD, as a take on critiquing dissemination practices, is that much resistance to feminist HCI thinking has been through written critiques from other approaches within HCI. Of course, no approach is beyond criticism and it is not the intention of an SD approach to elevate itself in this manner. But there is a need to work in reflexive modes that do not end up being translated into the same material as the tools through which they are criticised. Text, as a medium, is the preeminent mode of research knowledge and criticisms of knowledge. By imbuing SD with a practice-orientation, and subsequent interdisciplinarity, it immunises itself from straightforward HCI critiques. Any critique of the practice should necessarily come from a similar position as the practice itself, broadening the conversation and allowing reflexivity to flourish in relation to HCI, not as a sub-category of it. This is also why it is important that SD approaches are not targeted towards existing

research domains of knowledge, such as submission tracks at conferences. SD is a practice that researchers can enter into in order to gain reflexive accounts of their work; not a practice to be translated into accepted dissemination formats.

7.3.3 *Implications for Feminist HCI*

In order to take advantage of the epistemological development afforded by situated knowledges in third-wave HCI, I am suggesting here that Haraway's concept has a potency in guiding us further in reporting research without purely textual accounts. This means that the audience for SD has to be to some degree unanticipated; if it is not, then the knowledge afforded by reflexive practice is in some way already altered to fit disciplinary convention. It is worth noting that feminist scholars have a unique position in the power dynamic of institutional lives. Messer-Davidow, in recognition that her own academic feminist privileges allow her opportunities in using educational institutions, calls for action from feminist academics to 'perform structuring mediations between ourselves as feminist agents and the system we want to change' (Hartman and Messer-Davidow, 1991, p. 282). So how can feminist HCI scholars working in their host institutions (e.g. research labs, university departments, industry) 'take care' of external societal issues while attending reflexively to their own, local social agency? The answer does not lie within one practice, but SD is intended to aid researchers in reflexively thinking on their embodied, social activities, in order to produce more reflexive, fuller accounts through more normative dissemination modes.

Situated dissemination practice concerns the undocumented everyday thinking in our workplaces that a researcher engages in unconsciously. This unconscious, yet critical practice is the form of practice omitted from papers, as the process of preparing paper submissions prompts us as authors to organise our ideas as coherent, easy-to-grasp ideas. The workplace is easily disregarded as a site of knowledge production, however SD attempts to engender more critical awareness of our own HCI research workplaces. Considering workplaces as sites of knowledge productions helps to consider institutions and their power structures, and engaging in SD could engender workplaces that host our discourse with better sensitivities in their management and organization of knowledge, and as a result of this find new and unknown audiences, and dissemination formats, for the research they house.

Critiques of dissemination also serve to diffuse the tension between distinct HCI knowledge domains that operate on contesting epistemologies. The conflict I gave an account of in my literature review between those in HCI who argue for a more scientific and rigorous approach, and feminist and STS scholars who argue for a more socially engaged discipline, cannot be resolved solely through their contrasting critiques of each other. By refocussing the critique onto forms of knowledge through SD practices, the parameters of the conflict are able to shift. Rather than thinking in terms of competing subdomains of HCI knowledge, SD proposes an approach through which alternative approaches are applied to HCI. Within this framework there is room for difference without being concerned with defining the discipline.

In conclusion to this brief review of reflexive practices, I have discussed the need for reflexive accounts in papers, as is being provided by new and exciting feminist HCI practice, and how this has engendered HCI knowledges with a more situated approach towards research, and particularly design research. However, dissemination routines pose practical challenges for researchers in trying to accommodate reflexive accounts of research in conventional written accounts of research, and the shortage of discussions on truly alternative dissemination practice that caters for reflexive positioning is where SD comes in as a new and distinctive, practice-oriented approach.

Such a shortage of existing discussion may be a result of researchers not taking their HCI workplaces, instead of publishing venues, as sites for reflection and reflexive accounting. Thus, we have yet to witness discourse networks on alternative dissemination because they are un-observed and undocumented. By integrating workplace studies and situated knowledges as a feminist reflexive practice, SD offers a new approach to understanding one's own positionality as HCI researchers, in order to critique HCI knowledges.

7.4 Situated Dissemination Practice

In this section, I link the themes developed through my the ethnographic and ethnomethodological studies, along with my creative practice explorations using performance theory, to synthesise a theory of situated dissemination. I develop three key aspects of SD that can be approached laterally in the workplace and expand the possibilities for studying academic research dissemination as a practice within HCI. I suggest examples of

embodied actions from the thesis that may help HCI researchers to disseminate research reflexively and collaboratively from their workplaces.

To claim reflexivity in thinking is not just about questioning how knowledge is produced but how it is materialised and distributed. That is, to take our academic positioning as not neutral, but embodied, subjective and messy. This would mean that in a university environment, there needs to be more debate between managerial assertions over research performance, and researchers as individuals, embodied practitioners. This practice, despite not leading to outputs as might be recognised through institutional frameworks, does demand institutional support and resourcing. This should not be applied as a top-down approach, but as an encouragement to researchers to identify and reflexively consider their positioning and their relationship to their research. A potential approach to scaffold SD could be described as follows:

- First, identify existing routines of dissemination practice, which may be located by paying attention to routinised forms of work/labour that denotes dissemination as a mundane or everyday activity;
- Second, seek a reflexive orientation towards situated routines that allows them to be visualised and understood as practices;
- Third, utilise intellectual resources to question institutional power influences on dissemination, and experiment and respond to forms of knowledges that have been suppressed

To produce a theory of SD as a feminist critique of dissemination practice by its very nature raises the question of what form such a critique requires. I am conscious that this thesis, as a textual account of SD as a developing methodology, is not in itself a form of SD practice. However it is not my intention that this thesis, and SD, should contribute directly towards a particular HCI research agenda, but rather for SD to be seen as an aide or prompt for the development of more widespread, normalised situated practices in HCI. In doing this, of course, it also acknowledges the risk that SD as a practice could become a routinised as part of academic practice.

I acknowledge my debt to the participants in my research who are colleagues working under the rubric of HCI, and offer the ideas in this thesis as a proposal for SD practice, and as a productive route for avoiding what I have identified as the potential pitfalls of third-wave HCI. My intention and ambition for the thesis throughout my time as a PhD student was to understand HCI knowledge production and dissemination. However, developing a theory of SD may enable change and development of HCI as an academic discipline. From the perspective of this thesis, there are two urgent tasks in developing a critique of HCI practice by HCI practitioners. Firstly, HCI academic practice needs to be more critical of HCI academic practice. That is, the disciplining of HCI should accommodate critiques about the ways HCI academics organise their profession in different parts of the world. Currently in the HCI literature, the debates about the profession are often reported as the development of research agendas and this usually results in a new kind of HCI are being proposed. This horizontal expansion of the discipline is important for introducing new theories and thinking tools as well as re-thinking and re-framing theories. However, as I have argued in chapter 3 and chapter 6, there is a tendency to regard knowledge in the humanities, especially in the arts and arts practice as supplementary to HCI. There is still a tendency in mainstream HCI to treat software/hardware engineering as the core of its research and other knowledge is seen as extensions or supplements to that core (see for example, the list of something-HCI published in ACM). This implicit hierarchy reflects the origin of the discipline, and the way it is taught as a subject in universities. While it may be useful pedagogically to place engineering at the core of the discipline for teaching the undergraduate curriculum, I argue that such essentialist HCI deprives the discipline of much needed multiplicity/diversity. This is exemplified by the dominance of ACM on HCI literature through the citation apparatus (ACM reference), such design of citation volume risks excluding authors and their theories who come from outside the traditional HCI literature.

Secondly, HCI institutions should try and raise awareness of the relations between academic HCI and the technology industry. Taking an SD perspective on the mainstream research agendas in HCI means enabling researchers to not only study the way technology mediates living conditions, but also enables the use of our insights to mediate technology and the ways they are researched and developed in the industry, and how they are represented in the mainstream media. HCI practitioners need to be critical of the rhetoric around digital

technology while staying actively engaged in the making and mediating of the materials of technology.

7.5 Contributions

In the following sub-sections I present an overview and summary of the thesis' contribution to HCI. I describe the possible implications for future work in the HCI context and beyond. The thesis contributes to three areas of knowledge that are central to contemporary HCI research. These are both methodological and theoretical contributions.

My thesis seeks to contribute towards an updated understanding of academic dissemination, in the light of a new political reality in which neoliberal policies in Higher Education are engendering an increasingly divided higher education and an increasingly managerialised higher education sector.

Secondly, the artefacts I produced in collaborations with my colleague offer a creative approach to critiquing hierarchies that are embedded within academic publishing, and also enable the support of the production of feminist knowledges and dissemination locally.

Lastly, my constant questioning of an appropriate 'ethnographic response' as part of 'doing' ethnography led to an integrated form of practice, where creative practice meets ethnographic studies. These two methods challenged each other during my research but at the same time they also allowed me to examine my ethnographic response through creative outputs, and vice versa. In other words, producing a textual account of the critique, as well as creative, mixed-media account of critique, enabled me to cross-examine the ideas that I have synthesised. Thus my textual account and the creative artefacts provide a diverse entry point for any potential audience and readers to scrutinize my critique of academia, and I may perhaps dare to say that this might be more accessible than simply providing a free PDF online.

7.5.1 *Dissemination Practice in HCI*

Through the thesis I attempt to raise awareness of the practice aspects of dissemination in HCI discourse. This was dealt with through theoretical reviews of existing literature on knowledge and power, but more strongly highlighted by examining dissemination in a

practically-oriented fieldwork. The groundwork I conducted produced several accounts of how academic staff in Open Lab engage and perform research dissemination. These accounts capture the inherently hierarchical structure that supports dissemination of knowledge from the individual researcher's desk to the global academic venues, and beyond these into different sectors of societies.

7.5.2 *Feminist Critiques of Science*

From its inception, the orientation of this thesis has been underpinned by feminist theories of science and representation. By gradually scaffolding the arguments around scientific objectivity, I built a case for reflexivity against it. The call for feminist reflexivity was largely motivated by incidents that highlighted the shortage of reflexive accounting during my fieldwork observations in the workplace, but it was also informed by critical thinking in HCI literature that debates the epistemological underpinning of scientific research in HCI (Sengers, 1996; Harrison *et al.*, 2011). However, no matter how feminist debates conclude concerning the way scientific knowledge is constituted, they fall short of addressing their own production directly. Moreover, the resistance I experienced in trying to report my research reflexively led to more experiments based on feminist writing and this eventually culminated in different renditions of my engagements and interventions in the workplace. Therefore, my research contributes to the feminist discourse in HCI by renewing the notion of reflexive research practice to accommodate alternative accounting practices and experimental research outputs. By focusing on the fictional dimension of ethnographic reporting, I also attempt to revive and contribute to the debates about the positioning between a researcher and the researched, the insider and outsider, the subject and object in an empirical framework.

7.5.3 *Academic Workplace Studies*

In chapters 4 and 5 I have documented two examples of local dissemination practice through participating in the production of two artefacts, namely CHI videos and CHI booklets. The analysis of these production processes unpacked the underlying principles that support dissemination as routine work. Building on my ethnographic insights into existing routine work, this chapter makes a departure from examining existing artefacts to exploring alternative dissemination practices. My intention in this departure is not to replace existing dissemination practices, but to expand the ways dissemination practice is conceptualised

within the HCI literature. The aim of a feminist dissemination practice is to establish a productive approach to critiquing existing practice, which allow researchers to address the materiality of routine work while caught up in a network of academic research dissemination.

In chapter 4, I highlighted the unique visuality in HCI expressed through video-making for dissemination and drew attention to the limited resources available at our workplace, for researchers to engage in thinking visually and performatively about video as a medium for dissemination. In chapter 5, the production of a booklet exemplifies how research dissemination is organised as routine work at a HCI workplace and this revealed how knowledge dissemination is currently perceived of without reference to materiality. In my reflection on the booklet study, I argued that such routinized dissemination practice in turn impacts on the way research and knowledge is produced.

7.6 Future Work

While there are things that I would do differently, or circumstances that I would like to have been able to change, so that I acknowledge that there is always room for improvement, I suggest that this thesis does have implications for future work. The thesis was intended as a workplace-specific story that could be scaled up to examine the wider dissemination culture in academia. Therefore, several important aspects of dissemination are not directly addressed in the thesis, and while the evidence provided in the case studies suggests how dissemination comes to be materialised, such understanding is related but not limited to future dissemination practice in HCI workplaces. For example, we may wish to draw from the materiality and visuality of research dissemination to inform curatorial practice in academic venues or build practice-based discussion of concerns with a public audience. In addition, the enormous expansion of technological research and of sociological research that is concerned with aspects of that technology and its effects on society provide major opportunities for the application of the SD approach discussed in this thesis, as does a performance-based perspective on research. Finally, the critique on dissemination practice in this thesis has focused on a Western model of academia, and notions of knowledge/power. There are other language and culturally-specific influences on the interplay between institutional power and individual practice that approaches such as the one outlined here may be well-placed to explore.

While it is important to take part in academic discourse and further research by contributing papers as suggested by Harrison (Harrison *et al.*, 2011), perhaps reflexive practice is not something that authors can easily document and evidence in writing because of its ongoing and relational nature. Nor is it a practice with universal standards which could easily be subjected to peer-review scrutiny and be branded as rigorous research activity according to the metrics governing such things. A researcher exercising her 'reflexive muscles' through situated dissemination practice is akin to her doing her Pelvic Floor Exercise (a topic of one of the Research Fictions documented in chapter 6, in that no one can see that you're doing it, but it is an essential and healthy practice. This may be the inherent limitation of paper, in that it suppresses our 'messy' expressions (Markham, 2013) in favour of a coherent argument and narrative, often post-rationalised in order to make it recognisable as academic concepts.

'Objectivity is supposed to be guaranteed by proper criteria and methods, continually corrected for gender, class, racial and other biases. Behind the feminist critiques lies our recognition that traditional selections are not independent of the values of those who make them. The selections that feminists criticise are made by people who have the authority to make them and thus to produce the knowledge their selections shape. Feminist critiques ultimately point to the hierarchical structure of cognitive authority that allows the perspective of some to determine the shape of knowledge for all' (Hartman and Messer-Davidow, 1991, p. 260)

There were increasing pressures from the politics of frameworks such as the REF and UK governing bodies to impose performance-related metrics onto research activity. This is exacerbated in HCI with close relationships with the technology industry that have their own inherent desires for performance-oriented research. We must draw away from such pressure and steer it to support desk-based reflection; situated reflexive practices that allow us to consider our research and its implications more fully. To put it differently, the performance driven culture of research has led us to believe that a researcher needs to be 'out there', performing their research, in order to avoid being seen as low-performance. But can we instead ask researchers to be aware of this performance, and of the performance of every day practices of research? If so, the performance driven culture of research may take on a very different feel, in which researchers use performance, performatively, in order to reflect on their situated practices of knowledge production.

On a pragmatic level, SD is about making reflexive practices part of everyday practices in the academy. The focus on mundane materials of dissemination is to encourage researchers to examine the way institutional aspects interact with academic research. The arrival of the knowledge economy is undeniably creating new kinds of pressure on research performance but the focus on outputs further steer our attention away from everyday actions. In this regard, SD can provide opportunities to engender universities and extend feminist and embodied thinking oriented towards research output to everyday actions in our workplaces. Many UK institutions are working internally towards gender equality through the Athena Swan charter which provides a framework that encourages better employment practices in universities. However, the measures taken towards improving equality under this framework are often viewed as tokenistic. This is partly because the actions are often organised through managerial, top-down decisions. In contrast, SD is about individuals exploring alternative conceptualisation of research outputs, in other words, a grassroots action.

7.7 Reflexive Account of the Thesis

How does it feel to be a feminist in academia? What social interactions can one expect from critiquing dissemination practice and searching for terms of reflexivity at her workplace? I conclude this thesis with a reflexive account of the production of this thesis. I do this in part because it would feel disingenuous not to offer a reflection on the production of this text, given the content and agenda of the thesis as an agent for the implementation of extended and developed feminist practices in relation to dissemination. I argue throughout this thesis that the embodied experience of the researcher has direct implications on the nature of that being researched. It would be a massive oversight to conclude the thesis, offering as it does an outlook on the future of academic/institutional practice, without reflecting on my own experience with the institution that I developed it within: Newcastle University. In this final section I want to give a personal account of the agency for producing the thesis and a pragmatic account of my own reflexivity in doing academic research. Therefore, my closing comments of this thesis is that such reflections pertain to issues of diversity, ethics, and culture in higher education (Ahmed, 2012; Phipps and Young, 2015).

7.7.1 *Beginnings*

My initial positioning in the lab as a student - taking on a task of unpicking dissemination as a practice - made me realise that such practice was woven into a hierarchical structure that places me very quickly at the bottom of the ladder. I often felt that the insights I produced lacked authority and I found it difficult to convey them openly to my peers, many of whom were eager to climb up the academic ladder. This meant that I became reticent about my research and I would find myself obscuring and describing a lot of my ideas as experimental or conceptual in form, in place of a critical practice. I also found it hard to present my research to the senior academics who manage the hierarchy in the workplace, and this included my supervisors with whom I shared the workplace in which my ethnography was based. Did I draw from the wrong source of theories which made my social interactions with colleagues difficult? Or was it that such reflexive practice inevitably confronts the very power structure that tries to suppress it? What gave me the strength to continue the pursuit despite feeling rather socially-awkward in the workplace for many years?

Going to a University is a privilege that I have constantly been reminded of during the course of this PhD study. I am a self-funded international student from Taiwan who had consciously chosen a life in the UK. This life in the UK was only possible because of the sufficient (but by no means excessive) funding from my family members, who also supported my desire to receive a Western education - first as a language student and undergraduate at St Andrews University (2002-2007), then as a postgraduate of masters and then PhD at Newcastle University (2009-2018). My mother and step-father also live in Newcastle, and I have considered it as home for many years. Although my postgraduate experience could have been reflected more prominently as part of the fieldwork in this thesis, indeed, as an auto-ethnographical account, I found the process was simply too painful to put into words. As I internalised the discomfort I experienced as a foreign student in the UK, it is only now that I feel confident in producing an account and speaking up - from hindsight - to those who affected my foreign body in discriminatory exchanges. I first returned to my initial PhD proposal to explain how, despite the constant and subtle discrimination I experienced, I sustained an interest in interrogating the dissemination practice that I was in some ways excluded from.

7.7.2 Bureaucracy

My proposal for the PhD was initially to produce design artefacts that support research dissemination through multimedia. Indeed, I started exploring the CHI video with a design motivation that could lead to prototypes that display academic papers in innovative ways. However, the breadth of HCI literature on alternative formats of publishing was, I found, rather limited to the literature of cognitive psychology on perception, or else was technologically deterministic. These were not the areas I wished to develop in as a researcher. Instead, I drew mainly from critical arts practice as I have explained throughout this thesis, to inform my exploration into alternative modes of dissemination. The first year of my PhD was rather fruitful in the sense that I found an orientation in the vast research world that I enjoy. However, my second supervisor at the time, based in a humanities discipline, was increasingly putting pressure on me during my second year to produce substantial writing of at least 20-30,000 words. Although this was not an expectation in the computing science department in which I was based, I agreed to the expectation. At the same time Open Lab also exerted a level of expectation on research students (implicitly more on funded PhD students) to produce research outputs (i.e. to produce publications). I failed to meet either of these expectations during my second year, and despite having passed my first annual progression review, my second supervisor recommended that I should abandon my study, or face being reported to the University for unsatisfactory progress. I declined to withdraw from my study, and fortunately my then first supervisor decided to support my decision. This conflict led to a subsequent emergency progress review panel, which was called forward at the School of Computing Science and involved the dean of postgraduate studies and other administrators. At the time, news about my unsatisfactory status reached other colleagues in my research group and on multiple occasions different senior academics gave similar warning about my performance and advise that I should consider giving up the PhD instead of 'hanging on to it' in order to keep my student visa to stay in the UK. These exchanges were very upsetting, because my father had passed away in Taiwan three months before my PhD commenced. By the time he died we had become estranged for two years and my biggest regret is that I never saw him alive again. I was in Taiwan applying for a UK student visa for the PhD when I heard the news. After his funeral my visa was granted, but I kept postponing my flight back to the UK. Instead I spent the next three months contemplating giving up the PhD opportunity and instead returning to the theatre environment I fell in love with in Taipei. Many of my family and

close friends also urged me to stay but as September approached I decided to leave my home country again, and return to study at Newcastle.

7.7.3 *Repercussions*

Experiencing a breakdown in communication with a supervisor and the subsequent experience with University bureaucracy had several repercussions. First, I took the warning of unsatisfactory as a serious indication that the quality of my work was below-standard, where in fact the dispute was over the quantity of writing I produced and not the research itself. Second, to prove that my progress was satisfactory I agreed to the terms offered to me in the review panel: to deliver a full paper draft ready for submission to a conference deadline. This framing of progress using a conference submission was incidentally—perhaps perversely—the subject of my critique developed from the fieldwork at the time (as discussed in section 4.4.4). Lastly, the kind of warning I received about my immigration status, was just one of the many examples of discriminatory behaviour towards self-funded international students I experienced throughout my study. To this day I still receive threatening automated emails from the university bureaucracy telling me that I will be reported to the Home Office for non-attendance at meetings, despite my telling them I no longer hold a student visa (I am married and settled in the UK). In my experience, this type of discrimination is not very visible on campus, nor is it well-understood (and I would argue that the stereotypical image of Chinese students as quiet and subservient makes it all the more invisible). My perseverance to continue the PhD was perceived not as an academic issue, but an immigration one by senior academics; and not simply administrators. It implies that the ‘Western’ experience of my life was privileged over the experience I had in Taiwan, and that in the same research group, I was a subject of immigration regulations, not an intellectual subject. These repercussions led to a nervous breakdown because of my inability to speak up for myself and I subsequently sought counselling and an interruption to my studies to reconcile these experiences and regain the strength to continue the research after a switch to part-time study.

7.7.4 *Embracing Irregularities*

In hindsight, these irregularities produced several developments in the way I conceptualised ethnographic participation in the context of critiquing an academic workplace. Upon my return to the fieldwork I found my previous underpinning feminist positioning to be more

urgent, as it became necessary for me to confront the differences between me and other public-funded students. I worked with colleagues who were open to discussions about their own difficulties in producing research, since my focus on the situatedness of researchers' in a workplace meant that the situatedness of our private lives is inevitably caught up in the exchanges between us. And as I pursued possibilities to conduct ethnography reflexively, I often had to resort to a list of my own personal 'real' experiences in order to sense-check my interpretation of my colleagues' descriptions of their 'real' experiences. My list of real experiences included my father's death, which was not used as a kind of emotional concession to lower the barrier for reflexivity, but as an experience that had a continued, real impact on me because I was, and to some degree still am, in mourning. These internal dialogues about the 'real' produced a lot of confusions and frustrations in the process of analysis and writing. But they were also fundamental to the researcher identities I have since embodied to continue encountering 'real' dissemination practice. This thesis, then, was written from the lateral experiences of being a student, a migrant, a daughter, a videographer, an aspiring researcher, an academic, a feminist.

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Appendix A

1. Prototypes die w/time, videos don't. 2. Show that stuff actually works. 3. Demonstrate concepts beyond paper (static) figures. 4. Reaches more audiences. 5. It's cool!!
A video showing a novel prototype or interface can help the understanding of the concept.
Because the interactive element cannot be conveyed sufficiently in writing, interacting with, and experiencing would be best. But lacking that opportunity video is a good second way.
Convey a lot in short amount of time, if done well. Sometimes it is easier to show the interaction than to try and capture it in words.
Easy to understand. Rapid overview of the main interests of the work. Onviviality (English?) Shows concrete realizations. If it's smartly done it can be a good summary of the work
Faster to explain the research. More fun than reading
I'm working on 3D interaction technologies and user interfaces that are highly dynamic and physically engages the users. My work demonstrates new interaction experiences that are very difficult to convey through text and static images.
In comparison to a demo it is very easy to "showcase" your work, show it to other people. Also the video can show 3D and temporal aspects that can not be presented in a slide set. And a video can "fast forward" this an much better visually and show for examples of process of 2 day in 10 seconds
It allows you to articulate concepts that may be difficult to explain in static/wow animated mediums.
It can clearly show it influence the behaviour and emotional states of the users.
It convey complexities in evocative ways - it has a narrative aspect that we are "used to" meaning the telling of your 'story' is within an acknowledged format.
It is a great complement that illustrate interaction that is hard to show with text or static graphics
it shows the variable possibility, it was a very open-mind experience, I was very curious what is video art word "For HCI"
It's easier and quicker for viewers to "get the message", when compared to other mediums such as text.
Many things cannot be presented through formal presentation (mainly static speaker). Some people cannot travel or aren't available at the period of Chi and should nevertheless be able to present their work
More expressive form of communication. More engaging content delivery in an era of attention deficit and information overload
My area of research is visual image.
My PhD :) = use of video in HCI. Video can be useful to represent interaction because video captures process over time.
Show dynamic aspects of an interaction. Show that system actually works
Some areas can be disseminated better and archived in this format
The most efficient (time, concept transfer) way to present the works.
To reflect my own work
Two reasons: 1. Helps you distil your main research findings by forcing you to consider what really matters. 2. Helps you publicize and promote your research to the community
Video conveys the emotion of the work and the experiences of the participants, which is very difficult with other media.
Video of a project allows it to reach a wide audience especially people outside of academia. Also great for collecting comments and discovering how a project is understood.

Videos and film are an essential method in communicating ideas within the field and in industry. These films are the currency of design agencies. However, necessarily our engagement with the author's contribution is more superficial. As such the ideas and expressions should be more novel. The acceptance rate should be harder - not easier. Neither the avatar or magnets work demonstrate this. Cf. Marc Owens' avatar Machine and Andrea Bianchi Accessories.

Videos are digital demos. It gives a general overview on what the research is about. Also it helps researchers appreciate other people's work more. Because they are able to see the visual aspects of the projects.

Work on crowdsourcing and visually crowdsourced behaviour and results tends to be very static. Other research very text based.

FOCUS GROUP

18 & 19 March 2013

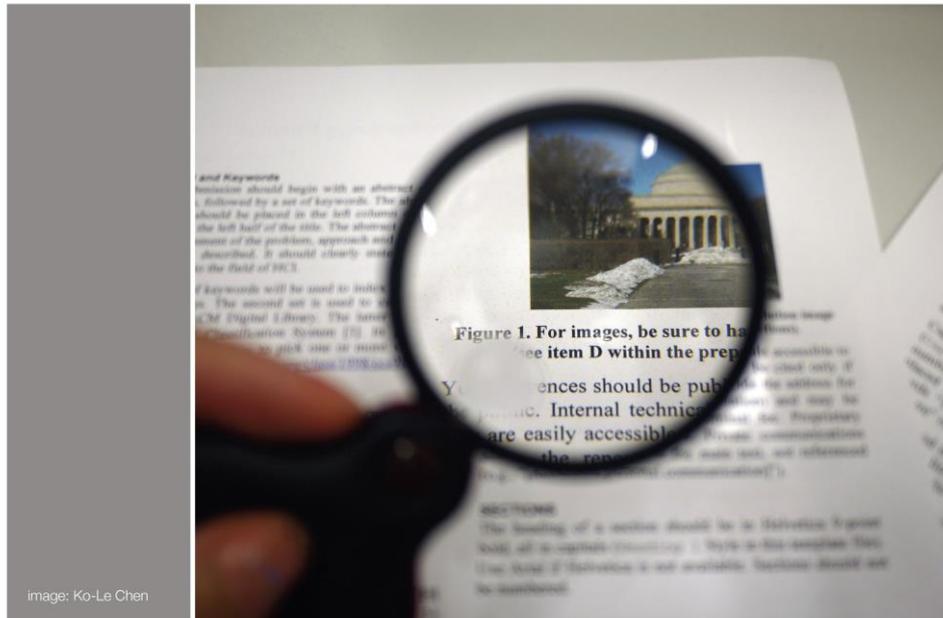


image: Ko-Le Chen

Recording scholarly thoughts on video

a pilot workshop with the Digital Interaction group at Space 7, Culture Lab, Newcastle University

Background

As part of my PhD I'm investigating how researchers may be invited to reflect on their writing, through thinking and designing new formats of academic publishing. This pilot study aims to create a space for you to unpick your written work and publications. Looking at existing video examples, we will discuss how you may or may not consider an alternative format, such as video, to disseminate your research findings.

Schedule

- 11:00-11:15 Introduction to the workshop.
- 11:15-11:45 Time for questions about the workshop aims. Discuss your experience in using multimedia to record any aspects of research activities.
- 11:45-12:00 Break
- 12:00-12:45 Brainstorming
- 12:45-13:00 Comments and summary about the workshop

Materials (optional)

Please feel free to bring any research-related documents you've authored

Documentation and data usage

The workshop will be audio recorded and photographed. Data will be anonymised and confidential information will be kept on password protected device. Findings may only be used by the researcher at conferences or journals.

Appendix B – 1

I, the undersigned, confirm that (please tick box as appropriate):

1.	I have read and understood the information about the project, as provided in the Information Sheet dated _____.	<input type="checkbox"/>
2.	I have been given the opportunity to ask questions about the project and my participation.	<input type="checkbox"/>
3.	I voluntarily agree to participate in the project.	<input type="checkbox"/>
4.	I understand I can withdraw at any time without giving reasons and that I will not be penalised for withdrawing nor will I be questioned on why I have withdrawn.	<input type="checkbox"/>
5.	The procedures regarding confidentiality have been clearly explained (e.g. use of names, pseudonyms, anonymisation of data, etc.) to me.	<input type="checkbox"/>
6.	If applicable, separate terms of consent for interviews, audio, video or other forms of data collection have been explained and provided to me.	<input type="checkbox"/>
7.	The use of the data in research, publications, sharing and archiving has been explained to me.	<input type="checkbox"/>
8.	I understand that other researchers will have access to this data only if they agree to preserve the confidentiality of the data and if they agree to the terms I have specified in this form.	<input type="checkbox"/>
9.	Select only one of the following:	<input type="checkbox"/>
	<ul style="list-style-type: none"> • I would like my name used and understand what I have said or written as part of this study will be used in reports, publications and other research outputs so that anything I have contributed to this project can be recognised. • I do not want my name used in this project. 	<input type="checkbox"/>
10.	I, along with the Researcher, agree to sign and date this informed consent form.	<input type="checkbox"/>

Participant:

Name of Participant Signature Date

Researcher:

Name of Researcher Signature Date

Culture Lab, Newcastle University, King's Walk, Newcastle upon Tyne, NE1 7RU, UK

Phone: +44 (0) 191 246 4639

Email: k.l.chen2@newcastle.ac.uk

Appendix C

Information sheet

This page explains the purpose of this interview and how the researcher intends to use the data collected.

Background

The Digital Interaction group at Culture Lab started to publish conference booklets in 2011. These booklets serve as mini programs which index staff and student contributions (e.g. papers, workshops, live demo) at the particular venue. As the temporary editor this year, my task is to collect all contents and appropriate existing text so that the final booklet reads as one coherent document. My main interest for the interview is to find out what you think your work is about in relation to the conference you'll be attending, and how you would explain your work to a lay audience.

The interview will be audio recorded. Data will be anonymised and confidential information will be kept on password protected device. Findings may only be used by the researcher for doctoral thesis, conferences and journals submissions.

Contact: k.l.chen2@ncl.ac.uk

Appendix D

ZOOM0158 (54:33)

00:00 (Me): Ah, ok. We have two hours together. I'm gonna try and explain to you why you're here, I think. First of all. And then do a really really lightweight introduction to what this workshop is about, coz god knows it is early days in PhD I don't really have that much to show, but, yeah. We'll have 15 minutes of me talking. And that's all the talking I'm gonna do in a big chunk. And maybe you guys will have lots of questions or very little - depending on what I say - after that. But yeah it would be super useful if you tell me, "I think what you're doing is really wrong and I'm having trouble engaging with what your interest is" And that's really why I'm asking you guys to help me do the pilot to start with, does that make sense? (P1, P2: Mmmhm, yeah) So yeah feel free to tell me that it's shit. And then we might have break <...> and go into "Brainstorming" which is really arbitrary, but it is just looking at some more practical design possibilities, depending on what we talk about. And if we still have time we can do this round-up chat.

02:00 (Me): So, I have this slideshow that I did kind of a dry run with my supervisors. It was to show what I was planning to do in the workshop. I think it would suffice to tell you what the plan is. So my PhD is, in a very general direction, looking at video for publication. It's more like an excuse to ask some of the underpinning questions like 'what makes an author' or 'what constitute knowledge'. But I think video as a format that I'm quite familiar with, having freelanced, is just a good entry point where on the one hand I propose new video format, on the other I investigate how academia function. So the workshop is not directly for me to draw design implications from our discussion. I'm actually quite interested in, having a 'design excuse' but then creating a space for us to think how we've done research so far. That's why I've invited RAs and PhD students like yourself, people who are at different stages in your academic career, together, so that hopefully you'll have a diverse perspectives or you might agree with each other on how you think publication works, and what's the most efficient way to share knowledge. That's what I'm listening out for. You might have very different opinions or you might not. And you might not even find video relevant at all for your personal expertise. But that's what this space is. Which is why I've cleared the furniture. For some reason. I think I was just worried that it was so cluttered. And I don't know you're probably quite new to the building but I've been here long enough to think oh that's the seminar room. And it was kind of a way to try and clear our usual assumptions of the space, and that might clear our head a little anyway.

05:10 (Me): I'll start with a piece work I've done, as an example to show what I...

Appendix E

<Me in bold and interviewee in normal>

It's just that I started to write the paper now and I want to get, in the description of the task I can't seem to give a good account of how the thing eventually was produced. I'm involved in some part of it but not all of it. I don't know how it got finished basically, and I know you will. I could have asked Patrick but we had a separate agenda for the interview so I left it out in the chat I had with him. So yeah do you remember how?

So what's your specific question Ko-Le?

So, quite pragmatically, I need someone to fill me in on how the last few days...

So is there a point where you don't, where ambiguity about what happens begins, and I can just go from there? **(Yeah!)** So when's that point?

So that's the point when the last email the manager sent out to, including subject 1 about proofreading.

Okay. **(So that's the day when I don't have anything to do left)** Yeah, so looking at your questions you said "Who were involved in the proofreading the content and why" So um, yeah, that was...on practical level. Who was involved, was subject 1, subject 2, and subject 3. So they each proofread the entire book, during the course of that day. So subject 1 was involved primarily because the manager, recommended him. Because he did quite a good job of proofing the UbiComp booklet the year before. Well actually I think he managed the content in general for it **(I think he wrote it)** Yeah he definitely rewrote or edited it anyway. Um, so there was a sense that he'd be good at that. But he was tasked by, I remember, so when, what day was it, Thursday? **(Find that email)** I think I was doing the proofing, which was going on, maybe the Wednesday? And on the Tuesday the manager kind of, whilst I was in the lab, gave some specific guidance to subject 1 as to how to read, so not to proof it and rewrite but to look for the small changes and highlight bits that don't make sense. So that was Wednesday when that happened.

But there was a bit of a problem, I remember on the Wednesday because, subject 4 was meant to send the latest version of the PDF of the booklet to us and we were gonna print it off and that. We were actually going to proof on printed copies, so we were going to annotate printed copies. And because we were so low on time, subject 1, 2 and 3 were gonna do them in parallel, but it was kind of compressed into a short space of time because we got them from subject 4, quite late, **(late in the day?)** later in the day than we initially envisaged. Um, having said that, three of them still did it. I asked subject 3 & 4, because they've been reliable for me, while, subject 2's been reliable for me in the past in terms of proofing. Subject 3 also offered to help, and I think subject 3 was suggested by the manager as well. **(And they're native speakers.)** Yes, they're both native speakers. Also in a way, when subject 3 read it I asked her to do it a bit differently. So subject 2 and subject 1 read it primarily just to make sure it made sense, in terms of English. But I also asked subject 3 to read it to make sure, just highlight bits where she thought didn't make sense in terms of someone who's quite new to HCI and Computing. So I was thinking more of a lay audience, almost And, so subject 1, from experience, subject 1's proofread things for me in the past, and you know, it's come back, it's a very different text to the one I gave. He actually had...