Quasi-design: Breaching presentations in academia

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Declaration

I hereby declare that the work presented in this thesis is my own. Where I have consulted the work of others, this is clearly stated.

Tim Miller

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Affect

The notion of affect derives from philosophy and is taken up by scholars in social and cultural theory and social psychology to explore people's being affected and thereafter feeling emotions. Affects are therefore imposed intensities that are thereafter processed and responded to by people. Affects can be understood by way of the traffic jam. In some cases, people, perhaps on their way to work, find that the road is full of traffic and that their journey is delayed. To some people, and for various reasons, this situation might cause a great deal of stress and, as a result, they might become angry and start irrationally pressing their car horn.

Affirmative design

This type of design represents what we typically expect of graphic, product, industrial or other similar types of design. Affirmative design is often applied to solve business or other problems in commercial organisational contexts. Affirmative design might be used to design a poster to advertise an event, a component of a jet engine allowing an airplane to fly more efficiently or an apparently more environmentally friendly shopping bag using renewable or other types of materials. Affirmative design is therefore design produced in support of commerciality, or, a commercial status quo.

Atmosphere

The idea of atmosphere is explored in the philosophy of phenomenology and is taken up by scholars in cultural geography and social psychology in conjunction with the notion of affect. This notion of atmosphere refers to the qualities of spaces that are generated when humans and the objects constituting them interact. For instance, some spaces, including a courtroom in a court of law, may be designed to mediate particular interactions that are associated with conduct we might understand as formal. Due to this, one might conclude that this space contains an atmosphere of formality.

Breaching experiment

The breaching experiment is a form of ethnomethodological research. In these experiments, taken-for-granted social orders are *unexpectedly* altered and through this "breached". This might involve one person conversing with someone else or conducting every day or otherwise routine workplace activities in unexpected ways that breach other people's expectations. Breaching experiments are conducted to observe how people respond to or "repair" alterations to expected forms of social order. Through this, people's expectations of and how they maintain social orders are observed and described.

Critical design

The people who practice critical design claim to avoid producing work in support of industrial production and the commercial marketplace. Often, critical design is humorous and uses satire to provoke discussion of new technologies. In other cases, critical design is used to present an alternative idea of technologies by producing films, photographs, object-based installations or events. Due to positioning itself in opposition to commercialism, critical design is often shown in or supported by cultural organisations including art galleries or museums. Due to this, critical design is often confused with art.

Design

In this research, I consider design as an overarching category for different types of design. This includes graphic, product, user-experience, building, typographic, branding, user-interface, affirmative, critical, speculative, critical-speculative, participatory, socio-technical, joint application design or design thinking. In this research, I consider the specific types of design that are active in particular organisational contexts. Affirmative design in commercial, critical design in cultural and speculative design in academic organisations – as well as the notion of quasi-design – are most important to this research.

Future breaching experiment

Future breaching experiments are breaching experiments that are imagined by people that may or may not be subject to them. They are possible breaches to the social order that the people potentially subject to them imagine. For instance, those potentially subject to particular breaching experiments might imagine how they or other people might feel if subject to them. They might also imagine what they or other people might do in response, or what they might become, when a part of these breaching experiments. This informs whether the people potentially subject to these breaching experiments choose to participate in them.

Future script

A future script is a script that is imagined, and which may or may not be enacted at a future date. They are possible human-non-human relations pertaining to the possible identities and subsequent interactions constituted within them. Future scripts are useful as a form of speculation. For instance, innovations researchers may choose to imagine different types of possible future scripts to explore how people might perceive or interact with new technological innovations. They may also be developed to explore how environmental changes affect people as well as non-humans.

Gender script

Feminist science and technology scholars build on the notion of script by taking into account both the interactions *and* identities constituted in them. Specifically, the notion of gender script is used to understand how the design of scripts enforces, in some cases, stereotypical gender identities or particular gender roles. For instance, a mobile phone designed for women might include fashion accessories that can be attached to the phone. The design of this telephone therefore includes the design of interactions associated with mobile telephone customisation and suggests female identity involves being fashion-conscious.

Loose script

A loose script is an arrangement of people and non-humans that is designed to be open to adaptation. For example, a vehicle trailer is designed to be used for a variety of purposes including for transporting goods. They are also adaptable platforms that hold potential to be adapted for other purposes including as a mobile variable message sign used to redirect road traffic or as a mobile lighting unit used to light roads that are usually unlit. Loose scripts have less of an effect beyond their immediate context than tight scripts as they forge less intense connections between lower numbers of actors over shorter distances.

Major breaching experiment

A major breaching experiment is a breaching experiment that is *expected* and *resisted* by those participating in them. For example, a breaching experiment is designed in which a presenter is asked to conduct a presentation in an unfamiliar way. When encountering this request, the presenter refuses to accept the breach of their expectations of the social order. In other words, they make excuses relating to, and avoid being a part of, the experiment. Major breaching experiments are useful to understand people's expectations of particular situations by way of their reasons for not taking part in them.

Minor breaching experiment

These breaching experiments are *expected* and *accepted* by those participating in them. For example, a presenter is asked to conduct a presentation in an unfamiliar way. When encountering this request, the presenter accepts the breach of their expectations and the social order. In other words, they attempt to overcome the breach by integrating the changes into their understanding of the social order. Minor breaching experiments are useful for understanding the creative methods people employ to overcome troublesome situations and maintain their expectations of the social order.

Quasi-breaching experiment

This version of a breaching experiment is a concept developed in this research and are *expected* and *adapted* by those participating in them. For example, a breaching experiment is designed in which a presenter is asked to conduct a presentation in an unfamiliar way. When encountering the request, the presenter adapts the breach to be more acceptable. In other words, the presenter re-designs the breach in relation to their understanding of the social order. Quasi-breaching experiments are useful to understand people's expectations of breaches through the participants discussion and re-design of them.

Quasi-design

This type of design draws on the problem-solving, humorous and knowledge-producing qualities of affirmative, critical and speculative design respectively. In this research, quasi-design involves the design of interventions that form the basis of major, minor or quasi-breaching experiments which are used to breach quasi-scripts. Through designing, discussing and holding these experiments, new interactions and their affects are explored. Quasi-design is a new type of design-led social research in which the useful, humorous-engaging and knowledge-producing qualities of design are taken into account.

Quasi-script

This concept builds on the notion of script by taking into account both the interactions *and* affective qualities of them. Quasi-scripts are therefore more than scripts constituting interactions as they are considered as holding affective qualities, too. For example, during a traffic accident there are a series of unfortunate interactions such as those between two cars one of which has an exploded tyre and a car airbag that is not working. Although these interactions can be described as an otherwise unfortunate accident, this situation can also be described as having an atmosphere of mourning, shock, horror or surprise.

Script

The notion of script was developed by actor-network theory scholars and is used to describe how the social world is held together. Scripts are designed human-technical relations that define *interactions* between humans and non-humans. These interactions are described as carried out as expected by designers or resisted by the people or non-humans which are a part of these scripts. In this research, scripts are considered as designed by designers. For example, a designer not only designs an object such as a vehicle trailer but a particular set of interactions pertaining to its use and possible transformation.

Speculative design

In this research I define this type of design as a type of futures-oriented design-led knowledge production in academic organisational contexts. Speculative designers often produce objects, technological devices, user interfaces or spaces not as ends in themselves but as a means to explore their future possible use or implication. These designs are later described in papers, books or other types of publications that are relevant to academia. This might also include showing speculative designs in gallery exhibitions or other interdisciplinary contexts – all of which are presented in ways that are suitable for publication in academia.

Tight script

Tight scripts are less open to adaptation than loose scripts. For example, the remote control of a digital projector might be designed to have only one button which is used to advance the slides of a presentation. This means that tight scripts constrain people's interactions. In this case, a tight script might reinforce general presentation conduct involving moving slides backwards and forwards. Tight scripts are therefore scripts that hold a more intense connection. Compared to loose scripts, they draw higher numbers of actors together thus forging connections between actors over larger distances.

Abstract

In this thesis, I explore academics' methods of presenting knowledge in academia. My central concern is academics' expectations of the use of Microsoft PowerPoint and similar software in routine academic presentations. I argue that academics' expectations of presentations are informed by design, the breaching of which reveals new knowledge of these expectations. In this research I draw on design, ethnomethodology's breaching experiments and actor-network theory's notion of script to develop the notion of *quasi-design.* This methodology is developed to be applicable in academia through the case studies of this research. In these case studies I undertook participant observation among academics who go about presenting knowledge in conference presentations, lectures and mock research interviews. I then breached these presentation scripts. Subsequently, I developed a method of design-led research that involves breaching not only scripts informing interaction between people and things but *quasi-scripts* containing atmospheres. These atmospheres are important as they affect my research participants who reveal their expectations of presentations by adopting, resisting or transforming disruptive breaches into *quasi-breaches.* Breaching presentation quasi-scripts therefore affects academics who reveal their expectations of presentations as informed by design. Through this, I inform our understanding of ethnomethodological breaching experiments, actor-network theory's notion of script, interdisciplinary social research situated between design and sociology and presentations given in academic settings. To conclude, I outline quasi-design as involving the breaching of quasi-scripts to explore people's expectations revealed in adopting, resisting or developing quasi-breaches in situations of presentation in academia and perhaps beyond.

Introduction: Design in organisations

1.1: A PowerPoint presentation caricature by Simon Elinas.

Towards the beginning of this research I commissioned a caricaturist to produce an illustration. The only stipulation I provided was that the resulting image must include a PowerPoint presentation. As caricaturists encapsulate subjects resonant with many, this image is an attempt to render such a vision of a PowerPoint presentation. In the image we see an audience bear witness to the presentation of knowledge about successful presentations. Within a configuration of furniture and technology familiar to many knowledge workers, a presenter reads three bullet points contradicting what the slides and they, as a result, are communicating. By considering this image further, three qualities of PowerPoint presentations appear. We might find the depicted situation humorous whilst imagining a more effective performance. We may be critical of PowerPoint's simplification of complex knowledge through observing lists of bullet points. Or, we may speculate on how such simplification might transform the knowledge communicated. In this research I will show how we can transcend the observation and analysis of PowerPoint presentation tropes. I suggest that by understanding PowerPoint presentations as socio-technical quasi-scripts

we can intervene in them in the re-design of academic routines. I therefore explore breaching presentation practices through which new knowledge of scripts and their hidden logics is produced. As a result, I reveal what this means for ethnomethodology's breaching experiments, actor-network theory's notion of script, interdisciplinary social research situated between design and sociology, and, our understanding of academic presentations.

Design

In this section I introduce the idea that three types of design are undertaken by three types of designer in three types of organisations. This is important as PowerPoint presentations such as the one described above are not only supported by designed technology but are also designed situations used in different organisational contexts to present different types of knowledge of these organisations and the world around us. The first type of design is "affirmative design", defined by Anthony Dunne and Fiona Raby (2013: vii, 34) as design produced in support of a commercial "status quo" (under "A" in their "A/B" design manifesto). I consider this type of design as derived from the British Arts and Crafts movement's response to inadequate working conditions in factories (Naylor 1971), and the Deutscher Werkbund's (German Association of Craftsmen) application of these ideas to improve the competitiveness of German companies (Burckhardt 1980). As a result of the activities of the Deutscher Werkbund, the Bauhaus school of design was founded in 1919 to unite economically beneficial utility with artistic vision (Gropius 1965: 57-58) whilst during 1953 the Ulm School of Design was founded and united design with humanities interests in multidisciplinary projects with organisations such as Braun and Lufthansa (Spitz 2002; Kapos 2016). Peter Behrens, one of the founding members of the Deutscher Werkbund, is often considered the first such designer. Behrens appointment at Allgemeine Elektricitäts-Gesellschaft (AEG) in 1907 involved designing buildings, objects and new products which presented an idea of the company to its existing and potential audiences (Stanford 2002). The application of "art" or "craft" to economic purposes involved the re-presentation of organisations and informed what we typically understand as "design".

During the 1940s, design became a priority for the United States government; teams of designers were brought together to design presentations, including for the Nuremberg war trials (Katz 1996). The 1950s saw Elliot Noyes use similar principles to manage networks of designers designing International Business Machines (IBM) computer technology and introducing it into the workplace through the use of multimedia presentations (Harwood 2001: 165). Hans Gugelot and Dieter Rams explored the aestheticization and presentation of what might be considered "user-friendly" products such as Braun's SK4 record player known as "Snow White's Coffin" (Spitz: 2002: 28-29). Later, during the 1970s, Ettore Sottsass

presented his typewriter designs for Olivetti to audiences the world over using lifestyle advertising which, in turn, presented the desired values of the Olivetti company (Brennan 2015). Design therefore became a tool to present an idea of organisations. Moreover, the products designers go about designing are also presented to audiences through other types of presentation design, too.

Noyes' management of designers at IBM during the 1950s reflected practices of design management that appeared later and in which corporate management is considered a form of design (Boland et al. 2008). Design management is often applied in design studios including advertising agencies or "laboratories of desire" (Hennion and Méadel 1993) in which products are presented in advertising designed using information derived from ethnographic research methods (Malefyt and Moeran 2003). Furthermore, branding agencies contribute to a "new branded world" (Klein 2000: 25) by designing corporate "personalities" (Olins 1978) acting to present and therefore sell products which are also designed using ethnographic research methods (Nafus and Anderson 2010). These products, that are offered by the "persuasional class" (Aronczyk and Powers 2010: 3), are often used by people to present an idea of their identities. This might include people's use of social media platforms to present as "post-feminist" (Banet-Weiser 2012: 51) or people's purchasing more environmentally friendly or fairly produced products to present as change-oriented cultural activists (Banet-Weiser and Mukherjee 2012: 1). Through this, meaning is added to everyday life (Arvidsson 2005: 5) for those external to (Lury 2004: 70) as well as those working in these organisations (Moor 2007: 32). Co-design (Binder et al. 2015) and British socio-technical, participatory and joint application designers present an apparently more-democratic idea of design, but whose attempts are often resisted by those invited to participate in designing (Asaro 2000). Further attempts by management educators to apply the participatory principles of design thinking to solve business problems often resulted in designers maintaining their role as the main agent in designing (Kimbell 2011). Design is therefore used to present an idea of organisations, their products and the discipline of design to audiences. These presentations therefore enrol people in support of *commercial organisations* and, in one way or another, they present themselves and their relationship to this *economic* status quo.

Articulating the idea of affirmative design allowed Dunne (2005) and Dunne and Raby (2001: 58; 2013: 11) to present a contrasting definition of design in column "B" in their manifesto – "critical design" – which is described as encouraging designers to "step away from industrial production and the marketplace". Drawing on the work of conceptual artists and Archigram, based at the Architectural Association in London (Sadler 2005) and other 1970s designers (Burns 1971; Ambasz 1972; Riley et al. 2002), this often humorous (Dunne

and Raby 2013: 33, 40, 43; Malpass 2013: 343; 2017: 67, 113) work involves the presentation of hypothetical scenarios presenting alternative ideas of scientific, technological or other social developments through discussion-provoking props, drawings, photographs and films. As the "products" of critical design are often displayed in galleries or museums (Malpass 2015: 60), critical design contributes to the work of cultural organisations. However, one must consider how Dunne and Raby draw on David A. Kirby's (2010) exploration of Hollywood science consultation as contributing to commercial tech-development, and, the humorous "Chindōgu" (Dunne 2005: 49) inventions of Kenji Kawakami (1995: 250) who is one of the inventors of the later commercialised "selfie-stick". Critical design is therefore a type of design that presents an alternative idea of design whilst nevertheless contributing to commercial interests by way of cultural organisations which are also part of an economic status quo.

Although critical designers later refer to themselves as speculative designers (Dunne and Raby 2013), I consider speculative design as design-led knowledge production in academic organisations in which books, papers or other contributions are produced. In this research, I'm interested in the longstanding relationship between design and the social sciences in industrial, research and academic settings. One way to understand the appearance of this type of work is by considering the collaborations between management researchers and social scientists in industrial settings in the 1920s. The Hawthorne Study is one of the first examples of a study that used design to produce knowledge, in this case, of the efficiency of factory workers at the Western Electric Company's Chicago-based Hawthorne Works. Richard Gillespie (1993) outlines the studies, which are often associated with Harvard Business School-based Elton Mayo, as involving the design of experiments that explored changing the light levels in the factory, increasing the workers' pay and interviewing them after the experiments had concluded. Furthermore, Gillespie (1993: 167) discusses how the results of the experiments were interpreted differently by psychologist Mayo, his colleagues who were concerned with anthropology and other scholars in different disciplines including sociology in the decades that followed. Gillespie (1993: 176) concludes that the "official" interpretation of the experiments was informed by the political, professional and personal values of the people and organisations involved. Design, in this case the design of a series of experiments in an industrial setting, situates the production and presentation of different types of knowledge of organisations and the world around us.

Another approach to the study of the workplace was developed by psychologist and founder of Massachusetts Institute of Technology's Research Center for Group Dynamics, Kurt Lewin. In 1944, Lewin coined the term "action research" which he outlined as a type of research that involved both changing and understanding organisational structures (Lewin

1946: 35). Action research was pioneered by Lewin and his students Alex Bavelas, John R. P. French Jr. and Lester Coch during the Harwood Studies (Burnes 2007: 217). The studies began in 1939 after Lewin was invited by Alfred J. Marrow to Harwood Manufacturing, a Virginia-based textiles manufacturer founded by Marrow's grandfather that was, at the time, manufacturing pyjamas. In his biography of Lewin, Marrow (1969: 141-152) describes a series of experiments each of which involved intervening in the Harwood factory work practices related to group decisions, self-management, leadership training, changing stereotypes and overcoming resistance to change. For instance, the group decisions example involved redesigning work-procedures to increase worker production. This involved developing a system of voting that allowed workers to define their own production targets – a process which acted to motivate them. This study therefore built on the Hawthorne Studies as it also involved re-designing factory management practices, but which created a more democratic workplace by involving the workers which, in turn, increased the workers production and wellbeing. Lewin also inspired the discipline of Organizational Development as well as America's National Training Laboratory Institute for Applied Behavioral Science which was founded in 1947 (Kleiner 1996: 30).

A democratic approach to workplace management was also evident in the work undertaken at London's Tavistock Institute of Social Relations, also founded in 1947. Although informed by Lewin's work (Neumann 2005), the Tavistock Institute is arguably better known for the development of the "socio-technical systems" research program – an approach to work design that attempts to "jointly optimize" the relationships between people and people and designed technology (Emery 1959). This approach was initially explored by Eric Trist and Ken Bamforth (1951) in their work with English coal miners and, Ken Rice's (1953) work in Indian Weaving Sheds. An interesting but perhaps lesser-known example is reported on by Lezaun (2013) who explores researchers attempts to improve the social life aboard an Esso petroleum cargo ship. In his report, the Tavistock researchers are described as reconfiguring the social relationships between people through attending to the design of the ship. Specifically, the researcher's noted a "strict hierarchy of rank" and turned their attention to the design and use of "common locations" including a bar so as to create shared or "integrated" spaces aboard the ship (Lezaun 2013: 219-220). The re-design improved life on the ship and produced knowledge of the workers by way of their acceptance of or resistance to design interventions.

As Lezaun (2011: 554) observes in another paper, the tradition of action research experienced a reduction in popularity in the United Kingdom during the 1960s. In despite of this, it was taken up in Norway in 1962 as a part of the "industrial democracy" program which sought to involve the workers in designing their work environments (Emery and Thorsud

1969; Qvale 1976; Emery 1977). In the paper, Lezaun describes the Balao project, which, much like the previously discussed Esso example, sought to dismantle the hierarchies of a merchant ship. The "experimental ship" Balao was launched in Gdunia, Poland, in 1972. The main difference between this and the Esso example was that the researchers were able to define the modifications to the ship prior to the study. In the early 1970s, social scientists from the Oslo Work Research Institute came together with architects and naval engineers to explore the social-psychological features of their designs (Lezaun 2011: 564). This study served as a type of "social miniaturisation" in that the enclosed space of the ship acted as a "vehicle for the generation of gigantic phenomena, out of any proportion to the physical size or institutional significance of the experiment itself" (ibid: 557). The interventions developed by the researchers therefore altered the ship and acted as miniature examples of larger social situations from which their social research could be articulated. Moreover, the experiment constituted a "demonstration" so as to produce not only social knowledge, but knowledge of the success of the researcher's interventionist research (ibid: 572), or knowledge of the researchers as successful in their disciplinary aims as professionals.

The work of Lucy Suchman (1987; 2007) in the Work Practice and Technology research group at Xerox Palo Alto Research Centre (PARC) continued this type of study during an exploration of the use of already designed photocopier interfaces at the research centre. Suchman's work is informed by Harold Garfinkel's ethnomethodology, which is a subdiscipline of sociology that is concerned with describing people's methods of accomplishing tasks in everyday life. In this work, Suchman describes how people use the photocopier interfaces not by following the user-guidelines but by developing their own methods of using the device. The subsequent involvement of ethnomethodology in design came about as a result of Suchman's work and Grudin's (1990) later critique of information technology research methods developed in psychology. This is evident in the discipline of computer-supported cooperative work or "CSCW" which is described by Grudin (1994) as concerned with how technology can better support people in their work. This informed a focus on ethnographic approaches to understanding social processes and the sociality of organisations (Hughes et al. 1994) and how this approach can be applied to systems design including in the hybrid discipline of "technomethodology" (Button and Dourish 1996; Dourish and Button 1998; Dourish 2004: 77). This reflects the use of ethnographic methods in human-computer interaction or "HCI" settings (Crabtree 2003; Randall et al. 2007; Button and Sharrock 2009; Reeves 2011; Crabtree et al. 2012; Button et al. 2015) and in contemporary design firms including Ideo and Sapient Corporation, advertising agency Batten, Barton, Durstine and Osborn (BBDO) and technology corporations such as Intel (Reese 2002: 21; Malefyt and Moeran 2003: 208; Cefkin 2009; Nafus and Anderson 2009).

Suchman's study also informed the development of the discipline of workplace studies. This work is similarly concerned with how sociology can inform technology design (Luff 1990: 1; Button 1993: 7) but also takes into account the corresponding changes in organisational sociology (Heath and Luff 2000: xiv; Luff, Hindmarsh and Heath 2000: xii) and what this means for our understanding of organisational environments (Heath, Knoblauch and Luff 2000: 316; Heath and Button 2002: 160). In this research, I am specifically interested in this "back and forth" between design and social research as evident in these ethnomethodology inspired disciplines, and actor-network theory. As I will outline in more detail in Chapter Two, actor-network theory builds on ethnomethodology by claiming that both humans and non-humans hold equal agency. These scholars therefore claim that non-humans inform people's interactions as much as people "use" objects to accomplish tasks. Moreover, one of actor-network theory's foundational proponents Bruno Latour (2009: 142) considers actor-network theory a design-led conceptualisation of society. In this sense, we can understand design as the design of objects which change the world around us and which we can then study to change our understanding of this very world. This idea of social research as a type of design is taken further in the work of John Law (2004) who claims that the methods used to study sociality are often more of a "mess" than they are given credit for and which often involve the "creation" of new social realities. Noortje Marres, Michael Guggenheim and Alex Wilkie (2018) explore this "invention" of new social realities and give credence to social research conducted in academia as a form of design.

This approach is, however, distinctly different from what Deborah Lupton (2017: 6) calls "design sociology". Lupton describes how design and conceptualisations of it including actor-network theory's notion of "script" – which I outline later – are often used as the basis for social research. Moreover, Lupton refers to the work of Les Back (2012) who notes a methodological crisis in sociology and claims that creative methods such as the design of digital "devices" (see also: Lury and Wakeford 2012) might allow researchers the opportunity to more innovatively "enact reality rather than simply reflect it". Lupton therefore claims that design can be used by sociologists to enliven the investigation of social worlds by inspiring creative thinking in sociologists and their research participants as well as eliciting responses that may not otherwise appear. For me, this means that there are two types of speculative design. First, there is what I call "design inspired by sociology" as presented in the work of Marres, Guggenheim and Wilkie (2018). Then there is "sociology inspired by design" as presented in the work of Lupton (2017). There is an opportunity, however, to bring these divergent perspectives together. In this research, I draw on affirmative, critical and this reading of speculative design to explore design as a form of presenting and realising one's expectations of the world. I do this by defining a type of design-led social research that is

neither design inspired by sociology nor sociology inspired by design. Through this, I explore how interdisciplinary researchers might go back and forth between design and social research. In the following section I outline my prior practice and through which an approach to ethnomethodological breaching experiments, actor-network theory's notion of script and design-led interdisciplinary social research can be considered.

Design and organisations

During my career as an affirmative designer, I worked in studios and agencies producing architecture, design and advertising. During this time, I became interested in how design involves presenting an idea of design and the designer. This inspired the development of my work at the Royal College of Art where I designed "contained experiments" (Lezaun, Muniesa and Vikkelsø 2012: 290) by drawing on ethnomethodologist Harold Garfinkel's (1963: 202; 1967: 42) "breaching experiments". Breaching experiments are considered by Michael Lynch (1993: 140) as one of the most controversial types of social experiment and have been likened to a "hostile", troublesome, "immoral" and anxiety-inducing method of "candid camera sociology" (Gouldner 1970: 394; Gamson 1974: 218; Mehan and Wood 1975: 113; McNall and Johnson 1975: 50; Gregory 1982: 50). My projects all started with my intervening in everyday interactions in unexpected ways much like Garfinkel (1963: 202; 1967: 42) did. Later, however, my versions of breaching experiments became more "contained" and I, as a designer, represented what Fabien Muniesa and Anne-Sophie Trébuchet-Breitwiller (2015: 321-333) refer to as "measuring instruments" for different designed realities. Muniesa and Trébuchet-Breitwiller draw on an ethnographic report of luxury perfume testing to describe tests as involving participants who act as proxies for other consumers. In my work, I construct similar tests in which I alter the social order – alterations which, in this thesis, I reflect on and describe.

This process is evident throughout my design practice prior to this research and which began with the project *Trailers* – a project in which I explored the varied use of vehicle trailers. This project is important, as it is where I first started to use a particular approach to observing and documenting changes to forms of social order. The project started with collecting images of vehicle trailers and taking photographs of them as well. Then, I would invent new uses for a small trailer, enact these in the public realm and reflect on people's responses to this. One example involved an attempt to use a vehicle trailer to undertake grocery shopping at a supermarket. A security guard refused me entry to the supermarket as they considered the vehicle trailer an unacceptable replacement for a shopping trolley. It therefore became apparent that design can be used to come to *know* individuals' expectations as presented during breaching experiments.

Figure 1.2: A vehicle trailer used as a shopping mall trolley as part of the project *Trailers*.

Figure 1.3: A vehicle trailer used as a supermarket trolley as part of the project *Trailers*.

I explored this method further in *Meeting People* in which I asked other people to take photographic portraits of me at London's Trafalgar Square – including requesting more than one photograph or a photograph be taken of me whilst I took a photograph of the other person, using another camera. I received some refusals whilst a less perturbed individual requested an e-mail address to acquire news of this "art project". This led to a meeting five years later, revealing other expectations related to my interventions.

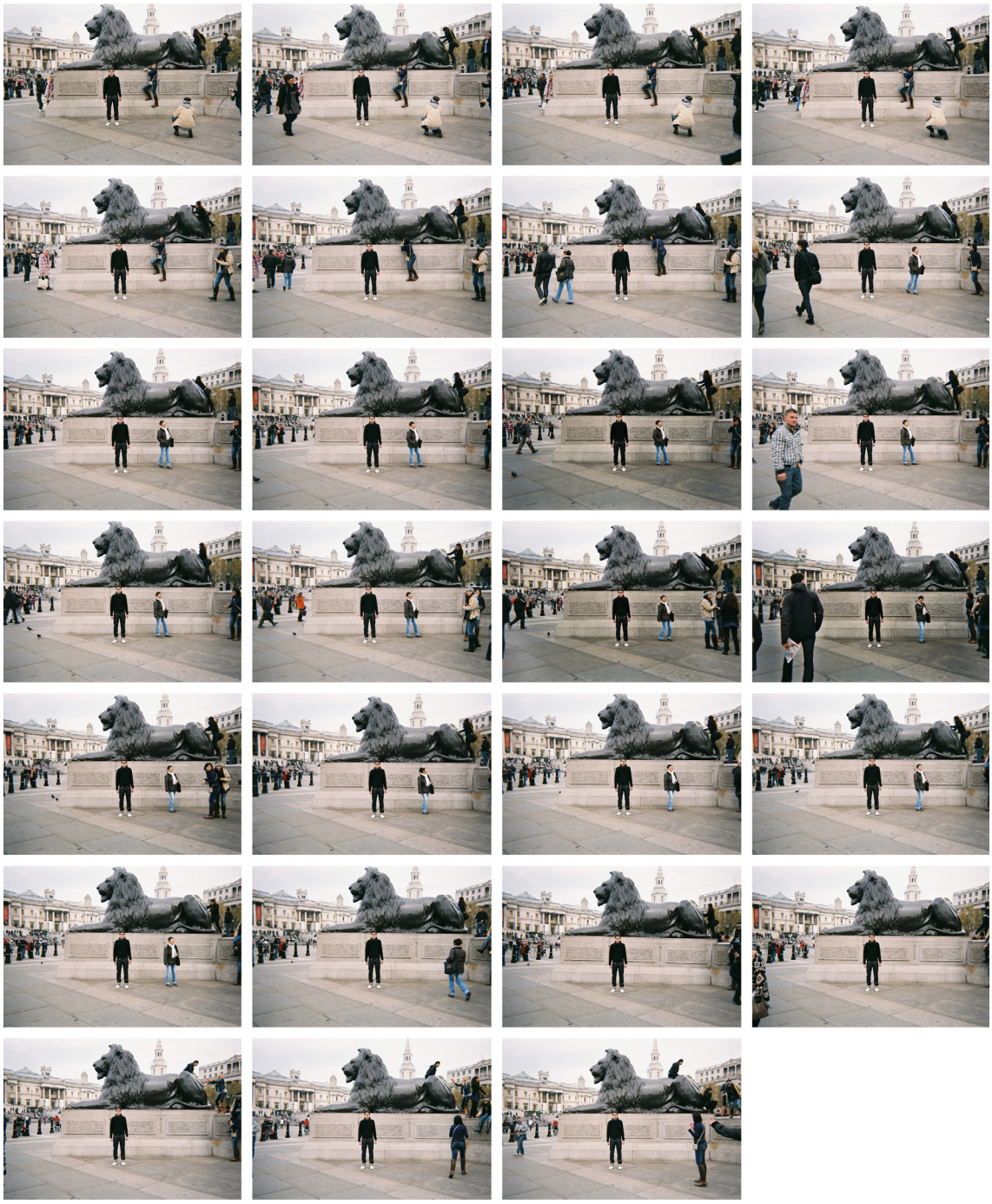


Figure 1.4: Photographic portraits as part of the project *Meeting People*.

I carried this interest forward in *Order* in which I attempted to order take-away pizzas with no bread bases. This revealed the takeaway franchise managers' expectations that pizzas are only pizzas with a bread base, as well as their methods of dealing with an unusual request. Although I considered these experiments creative challenges I was, however, involving people in them without prior warning as well as documenting the subsequent interactions using photography and film. I therefore began to explore how this approach might be taken forward as more ethical social research.

Figure 1.5: An attempt to order a pizza as part of the project *Order*.

I first explored this approach in *Covers* which involved advertising for interested parties to attend a casting for the role of "interviewee" in a film. Those applying were asked to write a cover letter describing their experience after which they were asked to read it to a camera. Eight participants therefore present their expectations of cover letters as well as this employment role as a business role involving a certain type of manner and dress. Following this, *Interview in Progress* explored a film documenting a workshop made in collaboration with a London-based drama training company. The film depicts a black-box theatre event in which an audience sits behind a panel of screenwriters facing an office in which two actors sit. Eight audience members were asked to arrive with an answer to one of two questions. Each candidate stood up in turn and read their answer after which the actors enacted this same answer which was then re-written four times by the screenwriters. One audience member's account of dealing with failure described over-ordering some pink wigs whilst working for a costume shop. The answer was then re-written to describe having taken the wigs to a rock concert involving dying and selling them which included meeting Tom Cruise. When I presented this project, people's expectations of it were presented, too. Some noted the increasing fictionalisation of the answers to the questions to a point where the events no longer resemble the reality previously described. The training company, however, considered the workshop depicted in the film as a legitimately useful object of commercialisation holding potential to be used with students or developed to explore other workplace situations.

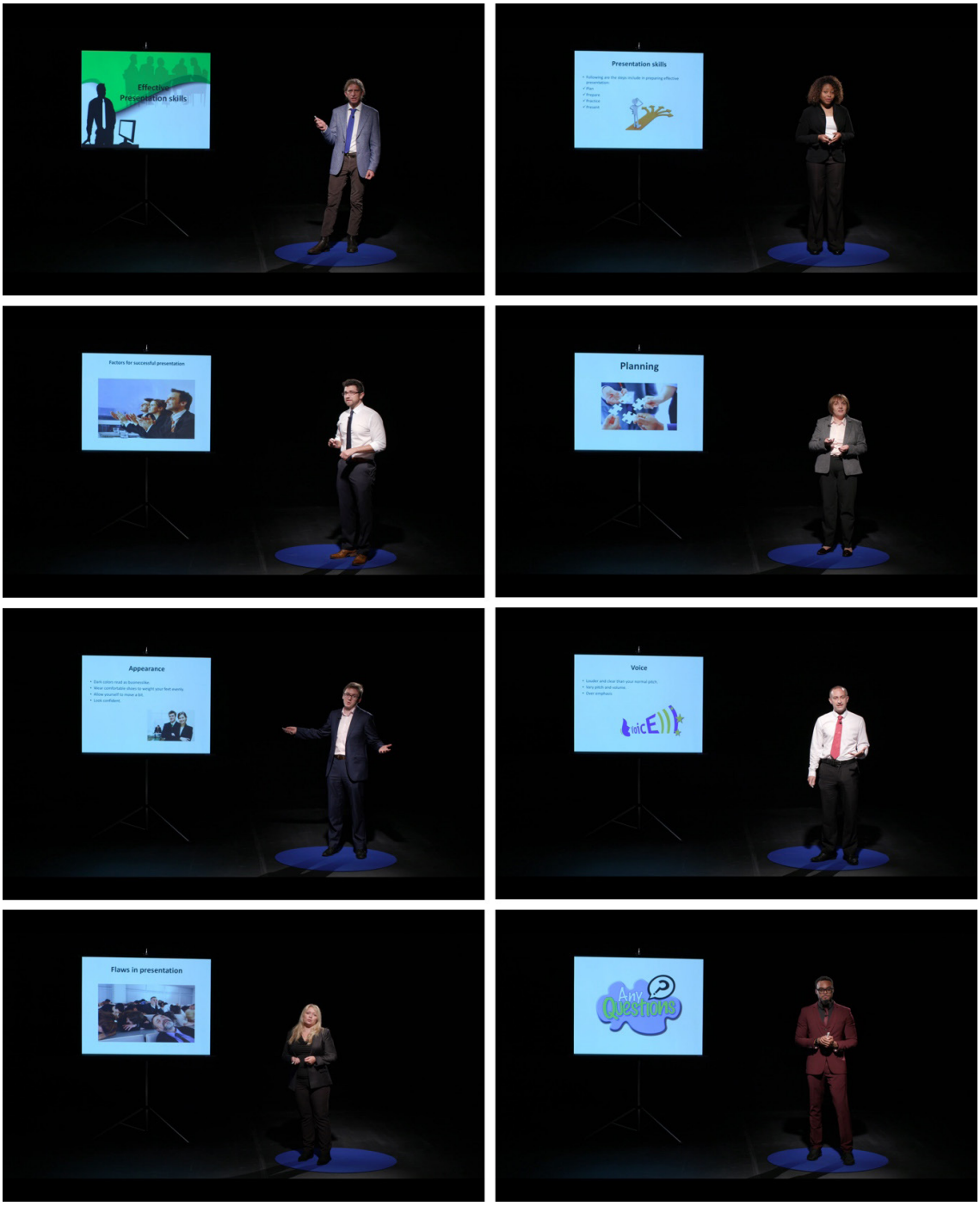
Figure 1.6: Stills taken from the digital video *Covers*.

At the end of presentations of my work, I often placed two photographs of myself – the second a retouched version indicating my being the product designed during my time studying at the Royal College of Art – knowledge of which I am expected to communicate in PowerPoint as a form of self-presentation. This is important as I consider presentations as situations in which knowledge is presented of the world around us, the organisations in which presentations are given and the expectations of the people giving presentations. In

this research, I attempt to transform the methodology used during this time to more extensively consider design as a form of self-presentation in and therefore revealing people's expectations of academic PowerPoint presentations.

Figure 1.7: Stills taken from the digital video *Interview in Progress*.

When beginning this research, I produced the film *Power Point* to start exploring how people self-present during presentations. I advertised on the internet for interested parties to present a ten-minute PowerPoint presentation on an unknown subject. Eight professionals, most of whom considered this an opportunity to practice presenting, were invited to a film studio to present a presentation about successful presentations I had found on the internet. In the video, the presenters all wear variations on a business suit. Some tell entertaining stories whilst another throws a necktie from their suit jacket pocket with humorous abandon. Although PowerPoint presentations are situations in which knowledge of presenters' expectations are presented, Nina Wakeford (2006) suggests academic researchers fail to include traces of their personalities in them. I therefore take as the starting point of this research the use of design to enliven academic presentations through activities which are also used to explore people's expectations. But to achieve this, I must first understand how the university constitutes an object of design whilst developing a "testing" method by way of ethnomethodological breaching experiments and actor-network theory's notion of script.



1.8: Stills taken from the digital video *Power Point*.

Design and academia

In the last section I described affirmative, critical and speculative design as affirming commercial, cultural and academic organisational agendas. Furthermore, I understand these designs as presentations through which people's expectations of the world are communicated. In this section I build on this to explore how I might consider a commercially productive, humorously critical form of academic knowledge production that explores people's expectations of presentations in academia. I do this by exploring universities as

objects of design and how the presentations taking place within them can be breached to reveal people's expectations of them. I understand academic organisations as consisting of organised taken-for-granted interactions as discussed in Garfinkel's (1967) ethnomethodological studies of human interaction. Garfinkel developed the term ethnomethodology after completing his doctoral study with sociologist Talcott Parsons in the department of social relations at Harvard University (Garfinkel 1952) and during an investigation of jurors' methods of deliberation in courtrooms in 1954 (Garfinkel 1968: 15–18). Inspired by the terms "ethnobotany, ethnophysiology and ethnophysics" Garfinkel encountered at Yale University, *ethno-* is a prefix referring to *people* to which a particular *methodology* is applied. For ethnomethodologists, varied methods are used by people to maintain, their expectations of the social world. For the jurors, their methods of deliberation are used to deliberate during which time their shared expectations of jury work are maintained. Everyday common-sense methods are therefore the way in which people enact as well as maintain their expectations of the social world. They are also momentary truths enacted by people that are described as ethnomethodological social research.

As mentioned above, Garfinkel (1967: ix) developed ethnomethodology in response to a dialogue between his doctoral supervisor, Talcott Parsons, and a frequent discussant during his doctoral studies, phenomenologist Alfred Schütz (Grathoff 1978: 123, 141). The work of both Parsons and Schütz concerns the nature of social action. Parsons (1937/1966: 44) considers social order as made up of actors accomplishing acts which have a "normative orientation". In this conceptualisation, people *choose* to accomplish tasks from different possible ends. Parsons considers this distinct from the work of scientists who direct their actions based on theoretical constructs that explain the world (ibid: 58). For Parsons, social order is accomplished by people making *rational* choices. Garfinkel also draws on Schütz's (1943: 137) similar suggestion which challenges actors' rationality whereby their actions are described as "automatic habits" or "unquestioned platitudes". Schütz (ibid: 134) criticises Parson's suggestion that people always behave rationally thus suggesting that their choices might be "assumed". Schütz (ibid: 149) therefore distinguishes between everyday activities and scientific reasoning – the latter being considered a result of actors' application of their common knowledge when undertaking scientific work which is "no more nor less real than the world of thought in general".

Building on but contesting Schütz's perspective, Garfinkel suggests that the only relevant truth of the social world is contained in people's methods of accomplishing everyday tasks. This is important as, when these procedures are interrupted – as Garfinkel demonstrated in his breaching experiments – people make sense of and often creatively "repair" the situation. This suggests that people are not irrational "cultural dopes" – a term

Garfinkel (1967: 68) used to ironically suggest how the actor is portrayed as rule-following in conventional sociological theories (see also: Lynch 2012b). He therefore draws on Emile Durkheim's (1895/1982: 60) suggestion that "the first and most basic rule [of sociology] is to consider social facts as things". Garfinkel (1967: vii), however, suggests that social facts are "an ongoing accomplishment" achieved through the "artful ways of that accomplishment being by members known, used, and taken for granted". In other words, social facts which are represented by people's methods are only facts in so far as they are being "made real". Garfinkel (1967: 77) therefore rejects the application of "analytical frameworks" to *explain* sociality and through which social facts are ongoing accomplishments. Ethnomethodologists therefore *describe* the methods used by people to maintain their expectations of social order. This process makes "commonplace scenes visible" as observable and accountable (ibid: 36-37). This might include describing how people accomplish their expected gender identity (McKenna 1985; West and Zimmerman 1987) or how students demonstrate that they expect lectures to end by nosily packing their bags (Tyagunova and Greiffenhagen 2017).

Ethnomethodology's perspective is therefore similar to philosopher John Austin's (1962: 5) "performativity" in which "speech acts" bring new states of affairs into being. For things to be done with words, Austin suggests, participants understand language as embedded in appropriate contexts through which that said with sincerity is accepted by all involved (ibid: 18). Austin's approach is taken up in Judith Butler's (1990: 144) concept of gender performativity where similar "practices of signification" produce one's identity. In a similar way, Garfinkel's (1967: 42) "immoral" and anxiety-inducing (Mehan and Wood 1975: 113; Gregory 1982: 50) breaching experiments are useful to understand how an individual's methods signify their expectations of the world around them. For example, Garfinkel's (1967: 42) initial breaching experiments involved instructing students to ask for clarification in conversations where no clarification was expected. This led to their peers responding angrily and presuming they were ill. When students observed their family members from the perspective of a lodger, they felt uncomfortable witnessing arguments and other familiar events which conflicted with their expectations of harmonious family life (ibid: 45). When asked to behave as lodgers, the students were often met with bewildered responses by family members who expected them to appear otherwise (ibid: 47). Breaching experiments are therefore useful to describe alterations to the social order and, people's responses to this in which their expectations of the social order appear, too.

Ethnomethodology holds a specific place in what Norman Denzin and Yvonna Lincoln (2003) refer to as "seven moments" in the history of qualitative inquiry. The first "traditional period" is described as between the beginning of the twentieth century and World War Two. This period involved the production of "colonializing accounts" of "strange people" from

"distant lands" and where researchers "represent the subject's story" (ibid: 19-21). The second "modernist phase", between the post-war years and the 1970s, is described as building on this with "interpretive theories" used to "give a voice" to society's underclass – a "golden age" where "cultural romantics ... valorized villains and outsiders as heroes to mainstream society" (ibid: 22-23). This is when ethnomethodology appeared, and breaching experiments were initially used to demonstrate people's creative responses to alterations of the social order. Ethnomethodology is also relevant to the third "blurred genres" moment which appeared between the 1970s and the mid-1980s. This moment involves researchers with "no privileged voice" describing rituals and customs to "make sense out of a local situation" (ibid: 24-25). In this research, I am specifically interested in this moment because I revitalise breaching experiments to make sense of presentations conducted in academia. I do this by addressing the ethical concerns associated with these experiments, specifically, that this type of research is often conducted covertly and without informed consent (Calvey 2008: 910). I do not, however, move into the fourth phase of Denzin and Lincoln's history – the "crisis of representation". I do not explore the biographical differences of my research participants nor my own with respect to this. I, for now, focus on revitalising the breaching experiment as more ethical and, what this offers us the opportunity to know of people's expectations of academic presentations. Later, I may integrate these considerations and further explore how this work might relate to Denzin and Lincoln's "postexperimental" and "future" moments of qualitative social enquiry (ibid: 29).

Breaching experiments have seemingly disappeared from recently published ethnomethodological literature (Gerst, Krämer and Salomon 2019; Greiffenhagen and Sharrock 2019; Kelly 2019; Koschmann 2019; Lynch 2019; Lynch, Gerst, Krämer and Salomon 2019; Meyer 2019; Meyer and Endreß 2019; Schüttpelz 2019; vom Lehn 2019) apart from discussions of them as "tutorial exercises" (vom Lehn 2016: 71, 74) or pedagogical tools (Laurier et al. 2019: 19-20; Suchman, Gerst and Krämer 2019: 7) which reflect more extensive discussions of them as student assignments in sociological teaching literature (McGrane 1993; Hanlon 2001; Rafalovich 2006; Braswell 2014). They do, however, appear in political science to analyse how the United States president Donald Trump undermined people's trust in democracy (Schedler 2019). More interestingly for this research, they also appear in computer supported cooperative work and technomethodology which brings ethnomethodology to bear on the practicality of design (Button and Dourish 1996; Dourish and Button 1998; Dourish 2004: 77). Andy Crabtree (2004c) furthers this approach by drawing on Stephen Mann's (2003: 332) "sousveillance" project in which breaching experiments are considered useful for collecting data relevant to developing and deploying design (Crabtree 2004: 68; 2004b: 26; Tolmie and Crabtree 2008). Others enact breaches in

workshops in which people are informed of them (Poole 2012) or are asked to imagine "future" breaches (Nilsson et al. 2019). Breaching experiments have also been discussed in inventive sociology as what Marres (2012: 79) and Guggenheim and his co-authors (2018: 69) call "experiments in living" and "practices of the self" through which people might experiment with new forms of sociality. This perspective reflects Douglas Benson and John Hughes (1983: 195) discussion of breaching experiments as potentially useful for academics to reflect on the "commonplace and mundane nature" of the work practices they are often "blind to ... accomplishing and ordering".

During my prior practice I also developed a way of conducting breaching experiments by informing people of the occurrence breaches and through which they are offered an opportunity to both reflect on and explore their conditions of living. If I again consider my previous discussion of this practice not one but two more types of breach appear. *Covers, Interview in Progress* and *Power Point* constitute *minor breaches.* In these projects, people are *informed* that the social order is refigured, *accept* this and through which we learn of their expectations of cover letters, interview questions and PowerPoint presentations. The participants chose to engage with these breaches as they found them useful. Due to this, they display no desire to repair prior forms of order. *Meeting People* however, is a *major breach.* I *informed* people of the occurrence of a breach – in that I wanted to introduce a second camera into an interaction where only one is expected. Nevertheless, most people *resisted* having their photograph taken at the same time as their taking one of me. *Order,* however, is a typical breaching experiment similar to those undertaken by Garfinkel. In this project, people were *uninformed* of the occurrence of the breach and through which those unwittingly participating in this experiment *resisted* my request to acquire a pizza without the bread base. This suggests that it is possible to design breaching experiments that humorously help people improve whilst I produce knowledge of their expectations of presentations. But how can we more clearly understand the organisations that are subject to these breaches?

Scripts and academia

Different types of design can be used to develop breaching experiments that reveal people's expectations of presentation situations in organisations. These presentation situations can, however, be further understood as socio-material configurations much like actor-network theory's scripts. Actor-network theory builds on ethnomethodological accounts of actors' communicative behaviours in which social structures appear in networks of human-non-human relations (Latour 1996c: 229-230). Actor-network theory, like ethnomethodology, is opposed to structuralist accounts suggesting that social structures exist prior to interaction

(ibid: 323). This perspective is clearly outlined in Shirley Strum and Bruno Latour's (1987: 788) exploration of human and baboon societies. Strum and Latour liken scientists to baboons, both of whom engage in ongoing testing to further particular goals, in this case, to produce scientific knowledge or knowledge of the social hierarchy. Moreover, Strum and Latour discuss the different levels of complexity displayed by the baboons and scientists by focusing on their manipulation of materiality. Baboon societies are considered unstable due to their lesser ability, whereas industrial societies control materiality at more coherent scales. Human's use of language pertaining to symbolic understanding, leading to the manipulation of materials and thereby communicating knowledge, suggests the design of more or less complex organisations as distinguishing humans from baboons (ibid: 791-792).

Universities are an example of such complex organisations. In universities, design is employed as a professional discipline, the technological products of which both support and reveal the methods through which academic work is conducted. Madeleine Akrich (1992) refers to these human-technical relations as "scripts" which is a metaphor drawn from film production (Akrich and Latour 1992: 209) in which designers inscribe "programs-of-action" (Latour 1992: 166) that people and non-humans enact or resist. Scripts are important to understand how people are enroled in and become a part of university life. This might involve people's attraction to an idea of universities often presented through design – whether that is gaining knowledge, partying, socialising, obtaining credentials, training for careers, exploring "alternative" forms of life (Farber and Holm 2005: 118) or appearing smart, knowledgeable, worldly, or professional (Becker 1986: 31-32). Designers working in branding agencies translate these values into other types of visual presentation including websites, brochures, imagery or environments (Moor 2008: 417), the resonances of which are ascertained in focus-group workshops (ibid: 419). The presentation of these ideas may appeal to potential university attendees' expectations of academia and, through this, enrol them in university life.

By understanding universities as a "multitude of scripts", I am afforded the opportunity, as Gareth Morgan (2006: 417) suggests in his book *Images of Organizations*, to show "how we can open the way to different modes of understanding by using different metaphors to bring organizations into focus in different ways" whilst "each metaphor opens a horizon of understanding and enacts a particular view of organizational reality". In this research, I draw on actor-network theory's notion of script to conceptualise "complex organisations" such as universities as a multitude of scripts. In this sense, organisations are made up of designed scripts which constitute technical objects including digital projectors which relate to other scripts such as PowerPoint software which pertain to scripts such as the central concern of this thesis – academic presentations. These scripts thus enrol other people and objects as a part of these organisations in which particular interactions take place including the

communication of knowledge. Through this, decisions pertaining to change or other adaptations of the organisation in question may or may not take place which elicit further responses including interactions and, as we will find out later, affects. This means that I use the metaphor of the script to offer an alternative way of analysing, intervening in and understanding organisational reality. As I will discuss later, the multitude of scripts constituting the university negatively impacted this research. This reflects Sevasti-Melissa Nolas and Christos Varvantakis' (2019: 140) exploration of researcher's creative agency when working for universities – creativity which often occurs beyond the bounds of the university such as during "walks to and from conference venues" or over a "shared drink".

As well as presenting an opportunity to be awarded an undergraduate, postgraduate or doctoral degree, the university constitutes particular "bodies" including students or "potential employees" as suitable for careers as sociologists, anthropologists, designers or psychologists – whose skills are also applicable in disciplines of "knowledge generation" (Castells 2009: 17). This might include careers advisors presenting students with opportunities to consider careers in advertising, public relations, technology design or intelligence research. Furthermore, support workers, health and safety professionals as well as human resources and other types of manager present what is deemed to be appropriate conduct in rooms across campuses and the constituent buildings including offices, studios, lecture-theatres and board- or seminar rooms. In corridors, people might briefly present their research ideas to each other during "corridor talk" – a skill apparently required to ensure relationships with peers (Downey, Dumit and Traweek 1997: 245). This might occur alongside reading notices presenting university events; consuming food left unfinished at meetings they were not a part of or answering e-mails presenting new job opportunities using mobile telephones (Hurdley 2010: 52-56).

Other scripts are designed to constitute the appropriate relationships in which academics and students present their work and themselves to each other. These include adventure-based role-play simulations (Abramson 2006) similar to business training courses in which one learns to better present an appropriate "business-self" (Lezaun and Muniesa 2017: 2). In other parts of the university, peer review situations offer academics the chance to present their research to a panel of peers who review their academic contributions in relation to university expectations (Lamont 2010: 22). Perhaps the mainstay of work in the academy, however, is academics communicating knowledge in a variety of socio-material scripts. These range from the generic, such as lighting or furniture to the use of notepads, laptops, or cameras in fieldwork. Academics also encourage people's production of knowledge of themselves in interviews in which sound recorders may be mistaken for toys by participants' pets (Michael 2004: 14). Others, however, might attempt to study and

thereafter present knowledge of their academic peers who do not wish to be subjects of observation (Williams and Klemmer 1997: 165). Perhaps obviously, situations of PowerPoint use are one of the most prevalent scripts in academia. I therefore understand presentation *scripts* as holding potential to be *breached* and through which academics' *expectations* of these very situations are revealed.

Presentations and academia

In this section I focus on the three presentation scripts in universities that I aim to breach. These presentations are therefore the case studies I explore in the substantive chapters of this research. Although academic presentations are designed scripts in which particular interactions appear, they, particularly when breached, *affect* people who respond in unexpected ways. I understand the notion of affect by way of Gregory J. Seigworth and Melissa Gregg's (2010: 11) "affect theory" which they discuss by drawing on Latour (2004: 206) who suggests that human beings are "an interface that becomes more and more describable as it learns to be affected by more and more elements". Latour considers people as learning to "register" and "become sensitive to what the world is made of" – sensitivities thereafter communicated through "body talk". I connect this idea to the work of Gilles Deleuze and Félix Guattari (1987: xvi) who, through discussing the work of Baruch Spinoza (1677/1996) and Henri Bergson (1896/1991), consider people as holding "an ability to affect and be affected" which is described as involving "the active discharge of emotion" and "feeling". The notion of affect is particularly useful for this research as, on the one hand, it offers me the opportunity to consider how affects precede interactions in scripts and how the details of this is communicated in different ways depending on people's different expectations of the world. On the other, it offers the opportunity to develop a way of speaking about what Ignacio Farías (2014) refers to as "virtual" affects in relation to actor-network theory, and, how more recent discussions of this (Müller and Schurr 2016; Lamprou 2017; Sage et al. 2020) can be furthered by bringing ethnomethodology's breaching experiments to bear on actor-network theory's scripts.

For instance, PowerPoint presentation scripts are prevalent across all academic disciplines including in the three presentations of concern to this research – conference presentations, lectures and mock research interviews. By attending to these settings, I explore academics' presentation of knowledge to different audiences, namely, their peers in other universities, students in their "home" universities and members of research funding bodies external to universities. Usually, these presentation scripts are made up of a projector fixed on a ceiling or placed on a floor-standing projector stand. The projector, beaming light onto a white surfaced pull-down or floor-standing tripod projector screen is usually

controlled by a laptop, remote control clicker, computer terminal or digital lectern. The computer is loaded with PowerPoint software. The presenter, having used this software to design their slides, stands in the vicinity of the computer used to change the slides and presents knowledge using the design of the presentation, including the images situated on presentation slides, the clothes they wear during the presentations and the other ephemera they surround themselves with. In response, the audience, sat on straight or arced rows of chairs, asks questions or applauds, signifying their expectations associated with the end of the performance.

Academic presentations often involve designed technologies including projectors similar to the one mentioned by Latour (1994: 36) in his report on a broken overhead projector during a university lecture. In the description, Latour discusses the projector breaking down and the "repairmen" repairing it. Situations such as this often occur during academic conference presentations, where the affective qualities of breached scripts and people's responses to them appear. The conference "panel session" presentation is a typical PowerPoint presentation undertaken in the university in which academics present knowledge to peers. Often referred to as a "paper", these short ten- to twenty-minute presentations are followed by an allotted amount of time for questions from the audience. The presenter and members of the audience then engage in discussion surrounding the subject presented, before the audience, and sometimes the presenter, too, applaud. In addition to the expected arrangement of technology and people, the previously mentioned "technical difficulties" – that academics somewhat expect but cannot predict – also appear. In these situations, presenters might fumble at the side of their laptops in attempts to repair a presentation technical difficulty (Supper 2015: 448), or, humorously blame their pet cat for a missing conference presentation (Sismondo 2018: 110–111). In moments such as these, academics appeal to their presentation audiences through sharing a type of humour that each person in the room might relate to. This represents academics' attempts to affect and, through this, appeal to their audiences and disciplinary allies at conferences.

Perhaps the most obvious PowerPoint presentation in academia is found in the lecture. These situations are often mediated by PowerPoint presentations given by a lecturer who stands at the front of a room of students sat in banked, rowed or other types of seating arrangement. Students often take notes on benches or small tables designed to fold from each chair if other tables are not provided. They might ask questions, mostly after but in some cases interrupting the lecture. Moreover, different lecturers use different technology. Ceiling mounted digital projectors are commonly used to support lectures including those given using PowerPoint software. This presentation software also supports the presentation of knowledge in art history lectures where image representations of particular artworks

typically adorn presentation slides (Nelson 2000). Although PowerPoint presentations are prevalent in universities, "old school" technologies may be used in other types of lecture. This includes in mathematics lectures where the blackboards that are often used by lecturers are also the means through which we come to know of mathematics teaching (Greiffenhagen 2014). Presentations made up of particular technologies therefore act as the means through which lecturers' disciplinary knowledge and expectations of disciplinary presentations are revealed. Furthermore, the expectations of the students who may be affected if their expectations of teaching are not met, might be revealed, too.

Perhaps the least obvious situation in which PowerPoint presentations are prevalent in universities is the mock research interview. Mock research interviews are situations in which a presentation is given, and an interview conducted in preparation for the same at a research funding body. Research interview presentations pertain to the potential acquisition of funding and are therefore important for researchers' careers as well as university reputations. Due to this, academics and their peers engage in changing a room in the university to resemble a "real" research interview. In these mock interviews, researchers are offered an opportunity to rehearse their presentations and receive feedback from a panel of academic peers on their (now-peer-reviewed) performances. To acquire this feedback, participating researchers present short research presentations to a panel of their academic peers. A series of questions are then asked by the panel who attempt to predict those that might be asked by the real interview panel. A discussion then takes place as to the quality of the research presentation and any possible improvements – including the re-design of PowerPoint slides or the type of dress worn by researchers. The mock interview is therefore an opportunity for researchers to adapt their self-presentation conducive to the refinement of their "personae" (Mauss 1938/2008: 18), whether "scientific" (Daston and Sibum 2003: 7) or other types of academic-disciplinary personae. Mock interviews are also situations that hold the potential to affect academic researchers who are subject to observation by their peers – who may or may not wish to be subject to peer observation themselves (Williams and Klemmer 1997: 165).

In this chapter, I first explored affirmative, critical and speculative design as types of applied art and craft which are used to present different ideas of design and the world to commercial, cultural or academic organisational audiences. I then explored my own prior design practice and concluded that design is a form of self-presentation through which people's expectations of the world are presented – particularly when these expectations are breached. I then explored how I might design different types of more ethical breaching experiments that offer the opportunity for academics to improve their presentation skills

whilst allowing me to understand academics' expectations of conference, lecture and mock interview presentation scripts. On the one hand, this type of design may help academics transform and through this improve their existing presentation methods in universities. On the other, designers might use this to reflect on the role of design in situating academics methods and expectations of presentations. This project, however, raises another possibility. As those reporting on breaching experiments often consider them problematic as they are typically anxiety-inducing, an opportunity is also presented to explore how academics are *affected* in and therefore *experience* presentation scripts. Due to this, I begin to consider how academics are affected in academic presentation scripts which thereafter inform the interactions that take place within them. This concern is therefore reflected in the following questions I answer in this research.

The questions this research answers

The introduction and the following literature review and methodology lead into three case study chapters which explore the breaching of presentation scripts in academic conferences, lectures and research interviews respectively. Together, these chapters and the thesis conclusion explore a three-fold contribution and are written for those associated with ethnomethodology, actor-network theory and interdisciplinary practitioners between design and sociology. This research therefore answers three different questions which are:

How can academic presentations be explored as socio-material scripts?

This research builds on an understanding of design as the creation of relationships between humans and non-humans constituting interactions in scripts. I do this by developing a method of design-led social research called quasi-design. In this research, quasi-design involves breaching academic presentations using different types of breaching experiments – what I have so far called minor and major and what I will later in this research call quasi-breaching experiments. Furthermore, these breaching experiments are designed as a method of intervention which also offers an opportunity for those in academic organisations to reflect on their presentations in a useful process of improvement or self-development. These situations are then used to observe academics' methods of presenting, through which their expectations of presentation situations are revealed. This means academic presentation scripts can be explored by using the different types of breaching experiments outlined in this thesis. This research is therefore of interest to ethnomethodologists as well as scholars interested in technomethodology, computer-supported cooperative work and human-computer interaction, particularly practitioners concerned with breaching experiments.

How can academic presentation scripts be understood as affective?

In this research I use quasi-design to breach three academic presentation scripts in three different ways. Initially, I explore this to focus on how breaching scripts reveals people's methods of presenting which is presented by their subsequent interactions in scripts. During this research, however, I noticed that breaching scripts offers an opportunity to explore how academics are affected and through which other affectual methods are presented. Specifically, scripts can be understood as affective, something which is revealed through their breaching, which subsequently reveals the atmospheres of scripts as modulated by people. Due to this, I consider academics' presentations as involving interactions and the modulation of atmospheres. I therefore understand breaching as holding the capacity to explore the interactions *and* atmospheres constituted in what I subsequently refer to as quasi-scripts. This research is therefore of interest to actor-network theorists concerned with the notion of script. This is of specific interest to practitioners associated with "after" or "post-ANT" including those exploring actor-network theory informed approaches to the "virtual" including the relationship between affect and atmospheres. As this research is conducted in academia, this research is of interest to those engaged in actor-network theory and wider science and technology studies-informed approaches to studying organisations, particularly academia.

How can academic presentation quasi-scripts be understood as significant?

The methodology of quasi-design involves the deployment of an inventive design-led method of social research that brings different versions of ethnomethodology's breaching experiments to bear on presentation quasi-scripts in three academic settings. These quasi-design experiments are useful in two ways as they offer the opportunity for academics to practice their presentation skills whilst those conducting them may learn from their efforts. Furthermore, what appears in these experiments are not only an individual's interactions or methods of modulating atmospheres but knowledge of their expectations of the world around them. Quasi-design is therefore as much a form of design as social research, through which we understand academic presentations as forms of self-presentation and self-realisation. This research is therefore of interest to interdisciplinary scholars situated between design and sociology. Quasi-design therefore offers a way of conducting either sociology inspired by design or design inspired by sociology. Furthermore, this is of interest to scholars concerned with telling about the world beyond text including through visual creative practices such as design. The quasi-design workshops that are used as the basis for

the substantive chapters of this thesis can therefore be considered a method of presentation. By engaging with these experiments, participants may transform their presentations whilst learning something new of them. In this case, academic presentations are not merely situations in which we come to know the world. They are the means through which we attempt to transform our experience of it and ourselves and our social worlds, too.

The outline of this thesis

In this section I outline the structure of this thesis to demonstrate how the questions posed above will be answered. The chapters include an introduction titled *Introduction: Design in organisations* which leads into a literature review titled *Literature review: Design and presentations in academia* which is supported by a methodology chapter titled *Methodology: Quasi-design and presentations in academia*. In these chapters I argue that design and academic presentations are forms of self-presentation that, when breached, reveal knowledge of people's expectations. I then present three case-study chapters including *Technical difficulties: Atmospheres in conference presentations*; *Old school: Expectations in university lectures* and *Changing rooms: Personae in mock research interviews*. In these chapters, I propose that academic presentations are affective human-non-human quasi-scripts in which academics' expectations and personae are revealed – including my own as a quasi-designer who both transforms and studies presentation situations. I conclude the thesis by extrapolating the findings of these chapters in *Conclusion: Quasi-design in academia.*

In this chapter, I have introduced designed academic presentations as holding the potential to be breached, and through which the expectations of presenters can be understood. In the *Literature review: Design and presentations in academia* I explore design as the creation of what in actor-network theory are referred to as human-non-human scripts. I therefore understand presentations as designed scripts that can be subject to breaches and through which people's expectations of them are understood. In the first section, *Design and presentations,* I consider how natural and social scientists' presentation of scientific knowledge is situated by the design of buildings and the interior spaces and objects populating them. In the second section, *Scripts and presentations,* I discuss how scripts encourage particular interactions whilst being designed to be variously flexible. I then explore how people's identities are transformed and how scripts hold multiple future possibilities. In the third section, *Academics and presentations,* I look beyond the constitution of interactions and identities in scripts to explore people's experience of them. I explore literature associated with affect and atmospheres and propose that the breaching of academic presentation scripts holds potential to reveal new knowledge of people's methods,

experience of and expectations associated with presenting in academic contexts.

In *Methodology: Quasi-design and presentations in academia,* I develop a distinct methodology which I apply in the case studies of the thesis. I start by outlining the methodology as developing new versions of breaching experiments and bringing them to bear on scripts. I then walk through the process of conducting this research. I outline the methodology as comprised of the initial exploration of areas of interest through visual sketches which then inform how I approach observing three presentation scripts in three academic settings. I then discuss how I draw on these sketches and observations to design some targeted breaching experiments which I further explore the implications of in follow-up discussions with the participants. After this, I outline the ethics associated with undertaking this type of research. I focus on how I design different versions of more ethical breaching experiments, how consent is obtained and recorded to prevent deception or distress during these experiments, and, how anonymity is achieved when I translate the collected data as research outcomes. In the last section, I outline quasi-design as a type of design-led social research which humorously aids the transformation of individuals' presentations and through which knowledge of their expectations is simultaneously produced.

Following this, I describe the application of this methodology in the three substantive chapters of this research which explore three presentations in three academic settings. In *Technical difficulties: Atmospheres in conference presentations,* I report on a presentation workshop I held at a scientific conference called *Technical Difficulties*. In this chapter, I first explore how humour appears in scripts and how humour is often used to repair presentation scripts in scientific conference presentations. I then outline the setting of the conference in which I undertook the presentation workshop and the design of the first presentations the four workshop participants conducted. I then discuss how I designed the breaching experiment to be a part of the workshop and then the result of this breaching. This is where I noticed that presentations are not merely made up of interactions, but atmospheres which phenomenologist Gernot Böhme (1993: 113-114) discusses as "a certain tone of feeling like a haze". After this, I explore how conference presentation and scripts in general can be considered atmospheres. Concluding, I consider what this means for the notion of script, and, pertinently, the appearance of quasi-scripts which I describe as a way to analyse and describe the interactions and affective atmospheres constituted in scripts.

In the second case study chapter *Old school: Expectations in university lectures,* I discuss my observation of some mathematics and art history lectures and a workshop called *Old School* I attempted run during them. I start by drawing on the notion of quasi-script developed in Chapter Four to explore how lecturers' reflexivity and expectations, appear in university lecture quasi-scripts. I then outline the setting of the mathematics and art history

lectures that I observed as a visiting researcher and thereafter my observations during these lectures. I describe how the lecturers altered the atmosphere of their lectures and how this is representative of their attempts to ensure that their students' expectations of lectures are met. After this, I outline my mostly unsuccessful attempt to conduct a breaching experiment with both the mathematics and art history lecturers. I then outline why this breaching experiment did not take place and how my discussions with the lecturers about conducting these experiments revealed their reflexivity and knowledge of students' and universities' expectations of lectures. To conclude, I outline why I consider prior studies of breaching experiments as ironic before proposing a new type of breaching experiment, called a quasi-breaching experiment.

In the last substantive chapter *Changing rooms: Personae in mock research interviews* I report on my observations of university-based mock research interviews and another breaching experiment activity that I intended to but, in the end, did not hold called *Changing Rooms*. In the first section I again draw on the notion of quasi-script to discuss how these quasi-scripts contain atmospheres and expectations (as discussed in Chapters Four and Five respectively). I also discuss how quasi-scripts contain knowledge of people's personalities and professions, or, their personae, too. I then outline the university setting in which I undertook my observations of a number of mock interviews after which I explore the design of mock interview quasi-scripts with a particular focus on the affective qualities of non-humans in these situations. I then outline how I designed, planned but in the end was unable to hold a particular breaching experiment with those participating in mock interviews. I then discuss how this enabled me to consider the appearance of the unexpected in mock interviews, namely, the appearance of the importance of presenting my own personae whilst undertaking research in academic situations such as mock interviews. I conclude the chapter by discussing how I consider my academic personae and by introducing the idea of the quasi-designer.

In the *Conclusion: Quasi-design in academia,* I draw on the findings presented in this thesis to reflect on the relationship between design and academia in Chapter One, the way of understanding design in academia in Chapter Two and the application of the quasi-design methodology outlined in Chapter Three. I then reflect on the application of this methodology in three academic settings, outlined in Chapters Four, Five and Six, from which I draw three conclusions relevant to three different audiences. In discussing the first contribution I reflect on the appearance of three additional types of breaching experiments in this research. I consider how these minor, major and quasi-breaching experiments are a contribution to practitioners concerned with breaching experiments in ethnomethodology and the related sub-disciplines including technomethodology, computer-supported

cooperative work and human-computer interaction. I then discuss the second contribution as related to my observations of the appearance of atmospheres and affect in what I refer to as quasi-scripts. I then discuss how I consider this a contribution to practitioners associated with actor-network theory, in particular, those concerned with scripts and what are referred to as "post-ANT" approaches to the "virtual". I then discuss the last contribution by way of the appearance of the role of the quasi-designer in this research. I discuss this role as involving breaching quasi-scripts, how this is a contribution to the work of interdisciplinary researchers between design and sociology, and, what this type of design-led social research tells us of presentations given by academics in academic organisational contexts.

After concluding the thesis, I also provide an *Afterword*. This is where I present this quasi-design project as a website which brings together the work I have produced before and during this research. This website, which I directed the design and development of by an interaction and graphic designer and website programmer, acts as the virtual interface of an organisation that offers quasi-design experiments as a designed service. It also represents my practice as a quasi-design practitioner. On the website, alongside encountering information about the project, the user can download a number of printable documents. These documents are translations of each of the prior practice projects I have discussed in this introduction, and the experiments conducted in the substantive chapters of this thesis. These projects have been translated in a way that allows them to be used by people to experience these quasi-design experiments, develop their own versions of them, or begin a conversation about them. Each of the projects discussed in this thesis have therefore been translated as text-instructions which allow other people to engage with the quasi-design project as they choose. By doing this, I not only bring the project together as what appears to be a designed service. I also point to the continuation and therefore the future of quasi-design.

Literature review: Design and presentations in academia

Introduction

In this chapter I argue that design situates presentations in academia. As different configurations of buildings, technology and individuals, presentations are constituted in and through designed academic settings. By exploring the presentations given in these settings, it is possible to learn of practitioners' methods of achieving academic work *and* their expectations of these presentation situations. To commence, I explore how communities of researchers are fostered by the design of buildings, their interiors and the various configurations of humans and other non-humans in these spaces. I thereafter explore how design such as this contributes to the knowledge produced *and* presented within them. I then explore how design can be understood by way of actor-network theory's notion of script. In particular, I explore how attending to design allows us to understand how people's interactions are constrained by the design of scripts of different levels of flexibility which in turn informs what people become in these human-technical relations. Furthermore, I consider what intervening in or breaching scripts tells us about people's knowledge and their expectations associated with and their experience of the world around them. I conclude by considering a type of design that acts to breach, and through this explore, interactions and the affective qualities of presentation scripts in academia. I argue that it is not only knowledge of interactions and identity that is constituted in human-technical scripts but that breaching scripts changes their atmospheres which in turn affects and reveals the expectations of those presenting knowledge in academic presentations.

Design and presentation

Knowledge and networks

This section explores how design situates the science work undertaken by scientists in laboratories. According to Thomas F. Gieryn (2002: 35), designed buildings stabilise social life, give durability to social networks and persistence to behavioural patterns. I consider laboratory buildings as supporting this through the aesthetic treatment and configuration of the interior spaces in which knowledge production and presentation takes place. The significance of building design is noted by Sarah Williams Goldhagen (2001: 1-2), Kiel Moe

(2008) and Sandra Kaji-O'Grady, Chris Smith and Russell Hughes (2019: 1) in their discussions of the effects of Louis Kahn's design of the Salk Institute for Biological Studies in La Jolla, California. These authors describe design as responsible for forming communities of natural and social scientists and supporting their production and presentation of scientific knowledge. In this research, however, I am particularly interested in the role of the interior design of the Salk as involving various arrangements of furniture, technology and people, and how this plays a crucial role in mediating the presentation of scientific work.

Bruno Latour and Steve Woolgar's 1979 book *Laboratory life: The construction of scientific facts* is a study in the tradition of "laboratory studies" that also includes Karin Knorr-Cetina's (1977; 1981) study of a protein research laboratory in Berkeley, Michael Lynch's (1985) ethnomethodological study of a Californian neuroscience laboratory and Sharon Traweek's (1988) study of particle physics laboratories in Japan and the USA. Latour and Woolgar's publication contains an anthropological study of neuroscientist Roger Guillemin's laboratory at the Salk. In the study, they trace the scientists' practices as informed by the design of the Salk's laboratories. Specifically, Latour and Woolgar note that Guillemin's laboratory is designed to be divided. They describe one side of the partitioned space as used for "cutting, sewing, mixing" and the other as containing "books, dictionaries and papers". They also describe a sub-division in each side whereby one area of the "cutting, sewing, mixing" side is described as containing animals whereas the "books, dictionaries and papers" section is designed for "writing" or "typing". Latour and Woolgar therefore describe the design of each of the spaces in the laboratory as configured to mediate specific scientific processes and the associated practices of knowledge production and presentation taking place within them.

Furthermore, Latour and Woolgar (ibid: 51) discuss the technical devices in each of the spaces. They describe "inscription devices" as any item or configuration of devices that transform a material substance into a visual figure or diagram usable by members of the office. These diagrams, usually the end product of scientific processes, are described as contrasted with others in published scientific literature to produce and present new knowledge. The design of the different areas of the laboratory are thereafter described as configured to support this process by offering the scientists the opportunity to undertake experiments, and write articles about, as well as facilitate discussion regarding the results of, their research (ibid: 53). As a result, the relationship between the human scientists and the non-human building, interior configuration and industrial equipment contained in laboratory served as inspiration for actor-network theory – an approach to social research that involves describing how design informs how scientific facts are produced, translated and communicated.

Networks and translation

Actor-network theory's foundational proponents Bruno Latour, Michel Callon and John Law, claim that the social world is made up of constantly shifting networks of socio-technical relationships. Actor-network theorists identify these networks. These networks are used to "describe how" configurations of people and non-humans interact and relate to each other as opposed to "explain why" they hold together in particular configurations (Latour 1988b). These networks also mediate the "translation" of the different human or non-human entities that are part of them. Callon and Latour (1981: 278) develop this idea by problematising Thomas Hobbes' (1651/1998) concept outlined in *Leviathan* that people formulate a way of living together through social contracts. Callon and Latour (1981: 279-80) replace the notion of contract with translation to discuss the methods through which the construction of networks can be understood. For instance, John Law (1986: 240) describes how Portuguese emissaries dominated the Indian Ocean spice trade in part through offering safer ship designs and translating potentially worried Portuguese seamen's lack of compliance into compliance. In another example, Callon (1986) describes how scientists design a shelter that presents an opportunity for scallops to reproduce safely but which presents fishermen with an opportunity to harvest them more efficiently. Similarly, Callon (1986b: 21) describes how Electricité de France (EDF) attempted to dominate the electronic car market in part by presenting a vision of a future world made up of social struggles and informing audiences' feelings towards the internal-combustion engine. This is important as it demonstrates that *design* is used by mediating "translators" to adjust socio-technical relationships which *present* opportunities to people or non-humans (Akrich, Callon and Latour 1988/2002). These processes are then described by academics who translate and *present* information from a variety of sources in scientific academic papers.

Latour (1986: 76) discusses a clear example of translation whilst outlining French biologist Louis Pasteur's development of the vaccine. Latour describes Pasteur's subjection of molecules to "trials of strength and weakness" in a relationship consisting of Pasteur as well as the various non-human tables, chairs, notebooks, pipettes and petri dishes of his laboratory. Latour describes these human and non-human entities as "going from abstract structure – actants – to concrete ones – actors" (ibid: 1996b: 373). Pasteur and the tables, chairs, pipettes and petri dishes he uses in a particular manner therefore translate from an abstract arrangement of disparate objects into an experiment through which weak molecules were identified, defined and used in the development of the vaccine. Pasteur relied on using these and other non-human materials, including perhaps the same table and chair as well as pens, rulers and pieces of paper, to translate an experiment and therefore the weak molecules into data, writing and a text document. Thereafter, Pasteur went on to

communicate this knowledge with the help of other non-human or designed materials in scientific demonstrations or presentations (ibid 1987: 85). Through this, Pasteur's knowledge was presented beyond the laboratory, giving birth to the vaccination procedures we know today.

A significant aspect of actor-network theory scholars' study of technology is the attribution of importance to non-humans as much as humans. Although a number of similarities exist between them, actor-network theory is a response to a dispute between natural scientists and sociologists of scientific knowledge regarding the nature of explaining scientific knowledge. In *Pandora's hope: An essay on the reality of science studies,* Latour (1999c: 1) recounts a conversation with a colleague who questions whether Latour believes in "reality". Latour (ibid: 3) thereafter discusses how scientific knowledge is not "discovered" in a pre-existing fixed-and-true "outside world" as natural scientists posit. Nor does Latour (ibid: 13) consider scientific knowledge as originating from "inside" or merely from people as sociology of scientific knowledge scholars posit. Contrary to considering scientific knowledge "discovered", sociology of scientific knowledge scholars developed the "strong program" to explore how scientific knowledge is the result of humans' interpretive capacities, or, the social construction of scientific knowledge (Bloor 1976: 2-3). Actor-network theorists, however, investigate different kinds of agency distributed across constantly shifting socio-technical networks including the agency of non-humans. Actor-network theorists therefore posit a "generalized symmetry" (Callon 1986: 196) between human and non-human artefacts thus informing how we know and therefore what we expect of the world around us.

Translation and presentation

So far, this discussion has focused on the extent to which design informs the production and presentation of scientific knowledge. This sub-section builds on this to consider *how* design informs the presentation of scientific knowledge and, with this, the self-presentation and expectations of the people involved. To begin, I discuss Latour's (1987: 1-17) exploration of the use of visualisation techniques to settle scientific controversies. In his book *Science in action* the role of designed computer technology is prevalent. Latour describes the use of John Whittaker's Eclipse MV/8000 computer in 1985 to visualise the structure of DNA. Tracing the story, Latour describes the methods used which include designing and visualising models through which others were convinced of the validity of the research. The design and development of computer technology including the subsequent methods of visualisation and presentation helped scientists validate their work through which our understanding of the world around us is transformed.

This reflects more recent interests in science and technology studies concerning the public understanding of science and technology (PUS). These scholars explore how public communities are established through the design of "technologies of elicitation" including discussion groups in which the public discuss and help present scientific knowledge (Lezaun and Soneryd 2007). In these situations, publics are asked to "perform" themselves (Irwin and Michael: 2003: 157; Michael 2009) in situations that are designed to elicit discussion about and thereafter inform them of otherwise unfamiliar subjects (Irwin 2001: 9-10). In these situations, publics often perform these discussions in relation to their self-proclaimed identities as "ignorant" of scientific knowledge (Michael 1996b: 112; Turner and Michael 1996) which means they are thereafter communicated facts that are also used to shape society (Wynne 1995: 362). But similar methods are used to enrol people in actor-network theory's power-tracing agenda. Bruno Latour and Peter Weibel (2002; 2005; 2020) and Christophe Leclercq (2016) present ideas associated with actor-network theory in art-style exhibitions. This allows us to understand presentations such as these as telling us about those that engage with them as well as the scholars who present this knowledge to particular audiences, too.

I therefore consider the presentation of scientific knowledge as an extension of presenters' self-presentation. Erving Goffman (1956: 14-15) considers office rank, sex, age and non-humans including computers or clothing as "expressive equipment" through which social roles are "front-staged". Goffman claims that people use their own behaviour as well as non-human props to conduct their frontstage performances in relation to a backstage. This is discussed by Goffman in *The presentation of self in everyday life* (1956: 12) and in his (1953) doctorate thesis "Communication conduct in an island community" which in part explored how hotel-owning crofters on the Shetland Islands perform in a way aligning with the expectations of their clientele. Goffman therefore suggests that the hotelier-crofters perform in a particular way whilst their real selves remain obscured. However, in *The body multiple: Ontology in medical practice* Annemarie Mol (2003: 36) suggests that front-staging is an important object of sociological study but that "there are *only* stages" through which identities are not performed but "enacted" or "front staged" (ibid: 34, 37). In this research, I am not concerned with exploring the validity of the notions of performance and enactment. I am merely interested in describing what is presented in academic presentations conducted in three academic settings.

Sharon Traweek (1988: 25) notes the use of clothing as part of people's front staging during observations of physicists at lunch in the cafeterias of particle physics laboratories in Japan and the United States. In her book *Beamtimes and lifetimes,* Traweek notes the apparent ease with which the physicists can be identified due to their wearing particular

outfits including those consisting of "rolled sleeves and jeans or nondescript slacks". Although Traweek notes an apparent lack of literature addressing women's fashion in science and academia (ibid: 168), Rachel Hurdley (2015: 182) reports on the use of different trousers in a British university. University staff's choice between "office pants" for use in the office and "pretty pants" for use during social occasions pertains to the use of clothes as aids to the enactment of professional roles. Scientists' presentation of scientific knowledge is therefore a model of self-presentation in which non-humans, including clothing, are used to present apparently objective knowledge. The use of non-humans such as clothing by scientists pertains to the presentation of knowledge of what Daston and Sibum (2003: 7) refer to as scientists' "scientific personae" and, through which, their expectations can be understood.

If facets of individuals' professions and personalities are subject to presentation in presentations, we must consider the presentation of individuals' vision of their associated academic disciplines and academia through the use of non-human technology during presentations. In the social science disciplines, presentations often involve projectors such as the one mentioned by Latour (1994: 36) in his report on a broken overhead projector during a university lecture, or other types of digital projector. Johanna Rendle-Short (2006: 131-139) discusses the use of a plastic drinking bottle as a visual cue in a computer science seminar presentation. Christian Greiffenhagen (2014: 5), however, observes the use of blackboards in mathematics which, he suggests, renders an "almost iconic" vision of a mathematician's use of chalk "to write strange symbols". This reflects Robert Nelson's (2000: 415) suggestion that an art history lecture "*is* the illustrated lecture" due to art history lecturers' use of slides and images when teaching. Although the use of technology in academia aids the presentation of knowledge in which self-presentation is evident, these situations also communicate visions of individual's expectations of, in this case, disciplinary teaching. This means academics' personalities and *expectations* are presented alongside scientific or other types of knowledge during the PowerPoint and other types of presentations undertaken in academia.

Scripts and presentation

Human-non-human scripts

In the last section, I discussed the role of design as situating academics' presentation of scientific knowledge as well as knowledge of their expectations of academia during presentations. I explored how this knowledge is communicated in these presentations by people using lecture theatre projectors, slides and images as well as other non-humans including clothing. This section proceeds by considering presentations such as these as

objects of design, and design as the creation of socio-material human-non-human relationships. One way of describing these relationships is by way of Madeline Akrich's (1992) notion of "script" which was developed with Latour (1992). According to Akrich (1992: 208), these scripts are much like film scripts in that they "define a framework of action together with the actors and the space in which they are supposed to act" (see also: Johnson 1998: 305-306). I consider Akrich's notion of script as similar to Woolgar's (1991) earlier exploration of designers' attempts to "configure the user" of new computer technologies and through this enforce particular interactions. Design is here reflective of designers inscribing similar "programs-of-action" (Latour 1992: 166) which Akrich suggests are constantly shifting relations at risk of change. Akrich elaborates on the notion of script in three empirical case-studies associated with electricity use in France and Africa. The first explores the development of a photoelectric lighting kit in France and its deployment in Senegal. The second is concerned with the use of electricity generators in rural Senegal. The third outlines the electrification of villages on the Ivory Coast. In these case studies Akrich suggests that designed socio-technical relations either exclude or unite different numbers of actors in scripts – the "object" actor-network theory scholars go on to describe as part of their scholarly work.

In the first of Akrich's (1992: 209-211) case studies, the photoelectric lighting kit is described as limiting end users' opportunity to negotiate the use of the light due to its shape. Interaction was restricted to a small number of actors in three different ways therefore leading to limited interaction and excluding certain actors from the script. In the case of installing the technology, the wires linking the components of the lights were fixed in length rendering installation difficult in different locations. In the event of technical difficulties, replacing the components was problematic in the local Senegalese market due to their only being available in Paris. Further impeding the repair of the light, the contractor installing the kit requested users not turn to local electricians due to a planned bi-annual maintenance visit. In the event of a technical breakdown, users were immediately excluded from the script in that they would not use the light. This case study highlights that the notion of script fails to consider multiple other possible scripts. This case study therefore overlooks a variety of future scenarios which might include, at one extreme, users dismantling or transforming the lights into another technological creation, or, at the other extreme, being electrocuted by the light during an unfortunate electrical accident.

In the case of rural generators in Senegal, various festive groups were described as re-scripting the generators which were supplied on metal trailers thus rendering the unit – also supplied with lights, record players or loudspeakers – mobile (Akrich 1992: 212-214). These units are described as given to or rented by youth groups in the villages and as objects

through which multiple possible interactions are inscribed. The interpretability of the generators therefore offered the end users the opportunity to enrol themselves in the network of the generators and contribute to or maintain the appearance of this particular script. It is therefore possible to imagine different groups using the generators for different purposes. This might include users deciding to use the generators to host a wedding, operate a music show or festival or undertake infrastructural roadside repairs during the twilight hours. In this case study, Akrich describes technology that is designed to be flexible as interpreted by users who obey a designer-imposed programme or script by using the technology as they choose and in ways that may exceed the designer's expectations. Akrich therefore suggests that the varied interactions offered by the generators are not examples of users' resistances to the designer's intentions as the flexibility of the generators was inscribed by them. This means that users cannot resist the designers' programme by using the generators as they choose if such a programme involves a plan for the users to use the generators as they choose. The only way the users might resist the designers' programme in this case would be for them to ignore the generators altogether.

The last of Akrich's case studies – the electrification of villages in the Ivory Coast (ibid: 214-216) – describes enroling the inhabitants of villages into networks of electricity consumption. The process of electrifying villages apparently pushes the associated actors into different roles. During implementation, users were enroled into multiple other contract-based networks which acted to re-organise a country through eradicating collective ownership thereby constituting the "individual citizen". Scripts are here described as a form of "long distance control" (Law 1986; Law and Singleton 2005: 335) through which the same citizens – now living in a fixed location – can be considered tenants or property owners who become the debtors or creditors of electricity companies as business owners or employees. This indicates the presence of multiple scripts as well as scripts of different strengths and weaknesses in which different types of actors appear. In the case of the lights, generators and electricity supplies, however, only one type of actor was considered – users of lights, interpreters of generators and individual citizens respectively. This ignores the other types of individuals that might be constituted as part of, for instance, the electrification of the villages. This might include a form of nightlife involving particular types of musician or dancer, or, perhaps, more-successful cooks or longer restaurant opening times due to the quality of light available on the Ivory Coast after dark.

Marianne de Laet and Annemarie Mol (2000: 227), however, address this in their discussion of a Zimbabwean bush pump in which they take issue with actor-network theory as it apparently advocates the agency of "Machiavellian" human actors that Susan Leigh Star (1990: 26) discusses as "managerial". de Laet and Mol suggest that the success of

technology does not require "a power-seeking strategist ... to change the world" – just as, they claim, Latour described Pasteur as doing so by developing a vaccine in his laboratory. Instead, they claim that the inventor of the bush pump is "serviceable" or "submissive" due to having designed a technology that is "fluid" in use and "constantly under review". Due to the inventor of the pump having designed a fluid object, different interactions and individuals can apparently be imagined as constituted in relation to this particular script. This is reflected in another discussion by Nelly Oudshoorn and Trevor Pinch (2003: 1) who similarly suggest that users resist scripts. To do this, they discuss a number of examples including how an alarm clock might be used in unexpected ways – including as a device to trigger a bomb. Although Oudshoorn and Pinch and de Laet and Mol here question the organisational qualities of scripts, these scripts are only flexible as much as Akrich's generators. In other words, each of these scripts are designed to be flexible. Any adaptation or interpretation of a script can only be part of the designers' designed programme of use. Although users might *feel* otherwise, this means that they nevertheless obey the script. In other words, "there is always room for interpretation of designs" (Gamman et al. 2012: 176). Although this idea of user agency is useful to explore what people do in and with the different levels of flexibility designed into scripts, the agency these authors delegate to users is illusory. In these cases, this agency – whether intentionally or not – is delegated by a designer who might indeed be more Machiavellian than de Laet and Mol suggest. The next sub-section builds on this to explore not only how scripts are flexible, but how they are designed to constrain or liberate users in different ways.

Tight and loose scripts

In this sub-section I develop a more intricate understanding of scripts as designed by designers to have different levels of flexibility. This is important as scripts are not merely flexible or not. Nor are they resisted by people when they interact in unexpected ways. Scripts actually vary in flexibility and therefore hold different opportunities for interpretation depending on their design. Michael Guggenheim (2010: 454-455) discusses the classification of a factory building as a mosque in Switzerland in a way relevant to understanding the notions of *tight scripts* and *loose scripts*. As part of a legal dispute, a local right-wing community contested the addition of a minaret to a factory by suggesting the building in itself constituted a sign. By understanding the building this way, the local right-wing community suggested that the material and formal qualities of the building – quite simply how it looks – classify its use. As the Muslim population was already permitted use of the space, they had, according to the legal judgement, already re-classified the building by using it in a particular way. In this example, Guggenheim suggests that buildings

are "defined through interactions". Buildings are therefore *loose scripts* which are easily transformed through people's interpretation and use of them. Buildings, according to Guggenheim, cannot therefore be "defined as a technology" such as black-boxed actant-networks (Latour 1987: 81). This is because their flexibility of use is the opposite of *tight scripts* which define people's interactions more narrowly.

Bruno Latour (1999: 191) describes a scientific or technical object that is "invisible" or accepted as a "black box". This is certainly true in the case of technical objects such as, for instance, the door handles fixed to the doors in Guggenheim's factory building. When the handles function appropriately, in that they are not broken or missing, they are taken for granted or unnoticed by those using them. When they stop working, they are made visible and attention is drawn to them and the now-disrupted processes they are used to achieve. A door handle is therefore a black box in that it is made of tiny screws, bolts, springs, cables and small pieces of machined metal, all assembled and contained together in a designed chassis one can twist to almost-magically open a door. The factory, which is made up of many of these black boxes, only affects the communities in relation to it. The factory therefore constitutes a network of black boxes – including the doors to which the door handles are affixed and the doorframe and wall which people walk through to operate the lights – all of which depend on each other for the proper functioning of the factory.

Guggenheim (2010: 6-7) therefore suggests that buildings are composed of many tight scripts which together render buildings unstable. It is possible to imagine the factory building as containing partition walls with doors opened by the previously discussed door handles pertaining to re-configurable rooms. In these rooms we can imagine a variety of pieces of furniture and other ephemera which can be rearranged and used and through which different activities take place in the factory. Although the tight script of a door handle here remains the same – in that it will mostly be used to open the associated door – the factory is likely to be transformed, whether into a restaurant, nightclub, live-and-work artists' studios, art gallery, supermarket, museum, music rehearsal or performance space or studio. Guggenheim therefore suggests that buildings are unstable and open to multiple different uses at the same time. Independent tight scripts, however, affect a wide array of actors on a much larger scale. The door handle in Guggenheim's factory is one such tight script in that, if it is not used to close and lock the factory door or if it is removed entirely, it could potentially draw larger numbers of actors around the factory. If the door is locked, only particular transformations of the factory take place. If the door handle is missing, however, other types of transformations may take place due to other communities freely entering and using and transforming the factory.

This indicates the existence of multitudes of tight and loose scripts constraining or

offering users the opportunity to develop their own interactions in scripts in different ways and to different extents. Albena Yaneva's (2005: 871-873) study of the use of models in Rem Koolhaas' Office for Metropolitan Architecture (OMA) supports this hypothesis. This study demonstrates that tight and loose scripts reach over longer and shorter distances. Yaneva observes the architects in the office increase the size and level of visible detail of their models resulting in a reduction of the number of actors surrounding them. Large-scale models are described as reserved for resolving design conflicts in the office. Small-scale models, however, engage experts, contractors, clients and the public and therefore lead to a building's construction. This suggests that the scale of scripts equates to a more-intense connection (Latour 1990: 5). This means that the loose script of Guggenheim's factory localised a group of actors who transform the building, seemingly only affecting the local area including most obviously the right-wing community, whereas the door handle held potential to enrol more actors over larger distances. Different levels of flexibility are therefore designed into scripts *by designers*. Loose scripts connect fewer actors over shorter distances whereas tight scripts are long in that they connect more actors over longer distances. Next, I explore how this flexibility does not pertain to users' acceptance or resistance of scripts. I consider how people identify with the opportunities presented by scripts and either transform or yield to these demands as designed by designers.

Gender and mind scripts

This sub-section builds on the last by considering the constitution of individuals' identities in their yielding to scripts. Specifically, I focus on individuals' identification with scripts. Historian of technology Ruth Schwartz Cowan (1993) coined the term "consumption junction" whilst considering how people consume technologies. The consumption junction explores the place and time in which people apparently choose between competing technologies. An example of this is found in Cynthia Cockburn and Susan Ormrod's (1993: 111) book *Gender and technology in the making*. In their book, Cockburn and Ormrod address a situation in which a heterosexual couple buy a microwave. In the study, "white goods" purchases are described as usually led by women and involve their identification with the attributes of one designed object over another (ibid: 156). This indicates that individuals' involvement in scripts is dependent on how, as Mike Michael (1996: 53) suggests, they conceptualise their identity in relation to networks they yield to. A similar notion is discussed by Gomart and Hennion (1999) whereby music listeners and recreational drug users are described as relinquishing agency to the rhythm of music or the experience of drug-taking. Individuals therefore not only consume objects that they prefer but yield to scripts, much like music listeners or drug takers.

Feminist science and technology studies scholars also adopt the notion of script to explore the enforcement of technology users' identities. These studies are part of a wider interest reflecting a turn to consider how users matter and how they are configured during the design of technologies. Many of these scholars are informed by the notion of script and explore the constitution of gendered identities in the design of technologies (Berg and Lie 1993; Hubak 1996; Rommes, van Oost and Oudshoorn 1996; 1999; Kirejczyk 2000; Spilkner and Sørenson 2000; Oudshoorn, Saetnan and Lie 2002). Using the "gender script" approach, Ellen van Oost (2003) reflects on the materialisation of gender through the design of male and female models of electric shaver. Oost describes the Ladyshave as displaying the simplification of shaver's technological components in contrast to the dismantlable and repairable Philishave for Men (ibid: 203-204). Through this, Oost suggests, the "technically incompetent female" is reified. This is similar to Leslie Regan Shade's (2007: 184) exploration of mobile phone design as enforcing the identity of women as fashion-conscious, Amanda Friz and Robert Gehl's (2016: 691) discussion of the sign-up feature of the social media application Pinterest as reifying women as more cooperative than competitive and, perhaps less typically, Oudshoorn's (2003; 2003b) study of the way in which the design of male contraceptives involves males in enacting attributes not typically considered masculine. Nelly Oudshoorn, Els Rommes and Marcelle Stenstra (2004: 33), however, circumvent suggestions that designers intend to enforce particular gender roles. They instead draw on Akrich's (1995: 173) "I-Methodology" to describe how male designers unconsciously base design on their own attributes – as also noted in the design of a municipal website in Amsterdam (Rommes 2002; Rommes et. al. 1999). In these reports, designers are described as unwittingly producing knowledge of themselves as represented in designs that they produce. This indicates that designers design manifestations of their own identities in scripts which attract users who yield to them and accomplish particular interactions accordingly.

The apparently unconscious manifestation of designers' attributes in scripts is addressed in Doris Allhutter's (2011: 691) conceptualisation of "mind-scripting". Allhutter draws on the notion of "gender script" to intervene in computer game designers' apparently unconscious work practices. Allhutter encourages the critique of these designers' work by engaging them in a workshop in which they are invited to explore their unconscious motivations during the design of an adventure computer game. The workshop process involved the participants' collective agreement on a topic related to a particular phase of design which was then written up in the third person, from memory. The comparison of the texts related to designers' activities, emotions or motivations then apparently gave meaning to their actions (ibid: 699). Gender scripts are useful to consider the identities constituted in scripts but fail to explore what kinds of possible identities *can* be constituted. If people yield

to scripts designed by designers who base them on their own attributes, would it not make more sense to explore the multiple future possibilities of an adventure game in various design teams made up of males, females or those who consider themselves gender neutral – to explore the different games produced as a result? Can we, through this, understand people as identifying with but nevertheless still enroled in scripts based on the opportunities presented in them beyond designers' expectations, too?

Multiple and future scripts

In this section I explore the appearance of multiple scripts as well as multiple possible future scripts. This is important as it demonstrates not only how multiple identities are constituted in scripts but how people still identify with them based on opportunities they see as presented. Paula Jarzabkowski and Trevor Pinch (2013: 585) explore the use of a "limp" key card to access the platforms of railways in Denmark and the Netherlands to consider the appearance of multiple unexpected scripts. This is markedly different from Akrich's (1992: 212-214) previously mentioned exploration of some generators where users were considered as resisting designers' implicitly imposed script. These generators, however, did not hold multiple possible scripts as the script was designed in a way to allow the generators flexibility of use. Jarzabkowski and Pinch (2013: 585-586), however, explore a breach of a script in which a train ticket becomes crumpled in a user's wallet and incompatible with the ticket machine. Furthermore, Jarzabkowski and Pinch explore an unexpected interaction in which a woman comes to the aid of a man with a crumpled ticket and, licking it to moisten its surface, repairs the script and allows the gate to work. This demonstrates the appearance of unexpected interactions through which the repair of an interrupted script takes place. Moreover, Jarzabkowski and Pinch consider the gender identity of the people involved by asking whether a man would have helped another man in the same way. This thought is extrapolated to consider that this interaction may have only occurred because the woman and man were destined to "fall in love". In other words, Jarzabkowski and Pinch describe feelings as contributing to some unexpected interactions in scripts.

Bastiaan de Laat (1996; 2000: 193) transcends the analysis of singular user identities which allows us to consider the multiplicity as well as the affective qualities of scripts. de Laat describes the "fictive script" methodology as involving tech innovators comparing possible imagined "future scripts". In three thought experiments with a French energy and environment agency, innovation research objects were analysed to inform a list of multiple possible socio-technical actors and their roles (ibid: 194-195). This type of speculation offered the agency the means to describe the "promise" (ibid: 201) of the new technologies they work to produce. This also reveals the means through which these innovation agencies

attempt to affect and thereafter inform how people might feel *excited* about the new technology innovations they may later consume and use. Alex Wilkie and Mike Michael (2009) expand this perspective by considering how UK-based think tank Demos uses different notions of "existing users", "emerging users" and "future users" (ibid: 514-16) to imagine and enact the deployment of location-based mobile technologies and, as a result, the preferred governmental policy. In their paper, Wilkie and Michael (ibid: 508-509) describe how this is achieved through imagining a series of future mobile telephone user identities that are enacted to "generate a general sense of movement or momentum" which manifests as a feeling related to "something has to be done" (ibid: 518). In these explorations, scripts are used as a form of speculation relating to the appearance of multiple possible users and interactions and through which new technologies and policy initiatives are presented by companies and described by science and technology studies scholars.

Constructive Technology Assessment is an approach to technology assessment that focuses on improving the design, development and implementation of new technologies. This means that the scholars associated with this work including Arie Rip, Thomas Misa and Johan Schot (1995) do not merely describe but use speculative approaches to manage the application of as well as increase practitioners' reflexivity when designing future technologies (Schot and Rip 1997). An example of this is Duncan den Boer, Arie Rip and Sylvia Speller's (2009) take up of Akrich and de Laat's approaches to explore how scientists might be encouraged to consider the possible future contexts for their nanotechnological scientific work. Constructive Technology Assessment is therefore concerned with the outcomes of the identities and interactions constituted in scripts whilst implicitly raising *concerns* about possible future scripts which others might feel *excited* about the prospects of or *urged* to enact. Similarly, Jarzabkowski and Pinch described how a script is held together through people's identification with and responses to the possibilities of scripts, in this case informed by feelings of attraction associated with falling in love. The notions of script, gender script, and future script therefore sideline the fact that affects appear in scripts. These affects are relevant to and evident in responses to scripts by those attempting to implement or warn of the dangers of specific future scripts. In the next section I address how we can begin to understand how affective responses appear and how this informs the individual's uptake of identities and interactions appearing in scripts, including those of academics exploring scripts.

Academics and presentation

Individuals and affect

This section focuses on how individuals are affected prior to the appearance of identities and

interactions in scripts. Through this, I suggest that more than identities and interactions are constituted in scripts and that this "more than" informs the constitution of them. Mary Shelley's *Frankenstein* often appears in science and technology studies literature (Winner 1978; Easlea 1987; Haraway 1990; Latour 1996; 2011; 2015), with the monster as a figure used to consider the constitution of individuals. This offers the opportunity to understand what Marc Berg (1998: 475) describes as the "merger" of humans and non-humans and how individuals of unanticipated capacities are produced as the result of the design of scripts. There are various ways to describe these individuals. Callon and Law (1995) discuss "hybrid collectifs" through which we can understand Callon's (1991: 139) suggestion that jet engines, barracudas, bank loans, computers and a tanned body constitute a "Club Med holiday". Perhaps on this very holiday, frustrated hotel owners, hotel guests, hotel room keys and weighted key fobs constitute "disciplined customers" (Latour 1990) who most likely return their rather annoying weighted key to the reception desk upon leaving the hotel. Implicit in each of these descriptions is the clear indication that people become Club Med holiday attendees or the disciplined returners of hotel keys to hotel reception desks. It is also clear that they specifically *enjoy* a hedonistic holiday mediated by hotel owners who are often *frustrated* that room keys are lost during the hedonistic frivolities now punctuated by moments of *annoyance* due to the weighted key fobs.

Similar explorations of the car suggest that individuals, feelings and emotions are constituted in scripts. Tim Dant (2004) uses the notion of "assemblage" to talk of the "driver-car" – a concept which has links to Latour's description of the constitution of the "safe driver" in relation to car doors, seat belts or "ethical drivers" and speedbumps (Latour 1994). Expanding both concepts, Lupton (1999) explores the breakdown of networks leading to "road rage" using the notion of "cyborg" developed by Donna Haraway (1991: 150). Michael (1998; 2001; 2001b) also considers road rage, using the notion "co(a)gent". Not only individuals but emotions appear in relations such as those between crashed vehicles, ambulances, flashing blue lights, traffic jams and a waiting e-mail inbox at one's office otherwise constituting "road rage". In one case, we have a Club Med holiday where everything is as one expects, and, through which, one might *enjoy* a hedonistic holiday experience. On the other, we have an *annoying* key fob and an *anger*-inducing traffic jam. It is therefore clear that people's experience in scripts informs their emotional responses, thus guiding the constitution of identities and interactions.

The appearance of more positive responses to scripts is evident in de Laet and Mol's (2000: 225, 252, 253, 261) discussion of the Zimbabwe bush pump. In their discussion focusing on the agency of the pump and its fluidity of use, different users are described as coming to "love" the pump. de Laet and Mol (ibid: 227) therefore question the idea that

scripts advocate the agency of "Machiavellian" human actors such as managerial male agents (Star 1990) including designers. This is further addressed in my previous discussion of people's identification with the possibilities of scripts and through which they assume particular identities. Through this, it is clear that designers do not dictate but offer scripts that people yield to informed by what they might become in scripts in which interactions appear. de Laet and Mol's example therefore demonstrates how emotions including "love" appear. This is reflected in other actor-network theory accounts including Latour's (1996: 289) discussion of the proposed Aramis personal rapid transit system designed for Paris that remained "unloved" and unbuilt or, Paula Jarzabkowski and Trevor Pinch's (2013: 585) consideration of a woman helping a man operate a train-station ticket machine, discussed above. Implicit in all of these discussions is the suggestion that what individuals become and do is informed by how they feel and *experience* the world around them.

This perspective is explored by philosopher Peter-Paul Verbeek (2005: 126) who suggests that the theory of script remains "biased towards action". Verbeek brings together a reading of phenomenology and the notion of script to develop a "post-script" philosophy of mediation. In this reading, Verbeek explores people's attachment to non-humans in a discussion of Eternally Yours – an industrial-design association set-up to create sustainable designs by encouraging people to keep consumer objects (see also: 2005b: 219; 2006: 373). Verbeek demonstrates the values of Eternally Yours in a brief discussion of a Nikon camera advertisement. The advert shows a still-working camera lying at the bottom of the ocean for ten years, communicating, says Verbeek, the idea of "an object the owner could be proud of" (ibid: 128). Eternally Yours are described as producing design that encourages people to "cherish" it – including furniture using materials that "do not become less attractive" over time (ibid: 127). In these examples, Verbeek describes design as eliciting an experience of *pride* and *attraction*. Verbeek therefore suggests that products that "invite us to get attached to them" are not "mere carriers of functionality" (ibid: 128).

The focus of Verbeek's philosophy of technological mediation is therefore a focus on how non-human technologies have a "presence" and through this engage in "demanding they be dealt with in a certain way". This presence, Verbeek (2005: 132) suggests, constitutes "delegations" from these non-humans to people and this is "underexposed" by actor-network theory approaches to technological mediation. Verbeek discusses this by drawing on Latour's examples of the speedbump and the hotel key fob to demonstrate how non-humans mediate more careful driving and the returning of keys to hotel reception desks. He also draws on Latour's example of a door-spring which was installed to keep a university door closed and the people inside warm (Johnson 1998: 300). Furthermore, Verbeek (ibid: 134) draws on Gomart and Hennion's (1999) discussion of music listeners and

drug-takers, mentioned earlier, to explore how people's attachments – in this case, to music and drugs – "cannot be adequately understood in terms of action" but are "events" that include "experiences", too.

Although I agree with Verbeek (ibid: 134) that attention should be paid to people's experience, I do not agree that we need to "go beyond the concept of script" to do this. Implicit in discussions is the idea that humans *feel emotions* which are the result of being *affected* by technology. If I refer back to the beginning of this section, I suggested that Latour's disciplined hotel customers return their keys to the hotel reception because they are *annoyed* that the *frustrated* hotel owner's intervention might interrupt their *enjoying* their holiday. I suggested that Michael's discussion of a traffic jam and a waiting e-mail inbox at one's office might constitute road rage due to *concerns* about a complaint if an e-mail is not sent. Furthermore, people appeared to fall in love with de Laet and Mol's bush pump as everyone was able to interpret the device and through this, perhaps, feel *freed* by it. I therefore consider Gomart and Hennion's (1999) discussion of drugs and dancing as allowing people to alter a prior emotional experience or to feel *united* in a collective experience. This thought can be extended to Verbeek's examples, too. The Nikon advertisement was described as eliciting *pride* in owners who thereafter keep their cameras; Eternally Yours were described as designing furniture using materials that maintain *attraction* and Latour's door springs allowed people to feel warm and *comfortable*. In the next sub-section, I explore this not by looking beyond but by exploring how technology mediates people's experience in scripts.

Affect and atmospheres

So far, I have discussed script theory as prioritising human actors (de Laet and Mol 2000; Oudshoorn and Pinch 2003) who define the interactions and identities of people whilst overlooking the multiple possible interactions and identities (de Laat 2000; Jarzabkowski and Pinch 2013) that are defined by people's experience of scripts (Verbeek 2005). In this sub-section I explore people's experience of scripts by drawing on Seigworth and Gregg's (2010: 11) "affect theory" which draws on Latour's (2004: 206) suggestion that human beings are a describable interface the sensitivities of which are communicated through their responsive "body talk". As discussed in Chapter One, I'm interested in connecting this idea with a specific trajectory of affect theory which draws on the work of Baruch Spinoza (1677/1996) and Henri Bergson (1896/1991) as developed in the work of Gilles Deleuze and Félix Guattari (1987: xvi) as "an ability to affect and be affected". This process apparently involves "the passage from one experiential state of the body to another" after which affects are described as a continual process involving "the active discharge of emotion" or a

"counterattack" to being affected defined as "feeling" – an "always displaced, retarded, resisting emotion". In this sense, affects involve the projection of emotions "like weapons" which are subsequently processed as feelings which are "interoceptive like tools" (ibid: 400). Brian Massumi (2002: 26; 1995) describes affect as "excess" and "autonomous" which "escape confinement in the particular body whose vitality, or potential for interaction, it is" (ibid: 35). In other words, an affect is an autonomous force imposed by an "outside world" and which are instinctually responded to. In Spinoza's (1677/1996: 136) words, there are no longer subjects just "affective states".

This trajectory is taken up in an essay by Patricia Ticineto Clough (2007: 2) in a volume she also edited on the subject with Jean Hally in which a critical-theoretical "affective turn" is described as focused on "affectivity as a substrate of potential bodily responses, of autonomic responses". In cultural geography, this perspective is furthered in Nigel Thrift's (2004; 2008b: 12-13) "non-representational theory" in which descriptions of affective states and their sensory qualities are prioritised over semiotic or sign-based readings of landscapes, cities and spaces. In other words, Thrift (2008) encourages a focus on the subjectivity not of people but affective geographies. I'm interested in how this perspective is adopted by Ben Anderson (2014: 5) who connects the notion of affect with the notion of atmosphere. Anderson does this by briefly discussing the notion of atmosphere as it is explored in psychology by Teresa Brennan (2004: 1) as a feeling that is transmitted between people that alters the behaviour of people as well as in sociology by Michel Maffesoli (1996: 11) in his report on the "emotional communities" that inform an increasingly "tribal" society. However, Anderson (2009: 78-80) mostly draws on the work of phenomenologists concerned with atmospheres including Mikel Dufrenne (1973/1953: 13) who describes atmospheres as made up of a variety of "sensuous elements", and Gernot Böhme (1993: 113-114; 2006: 16) who discusses atmospheres as "a certain tone of feeling like a haze" and "spatially discharged ... feelings".

Böhme's work is situated in the field of new phenomenology (Schmitz 2019) in which atmospheres are considered spatial (Griffero 2010; 2017; Griffero and Moretti 2018) and which apparently affect children's learning in schools (Wolf 2019) and people in organisations (Julmi 2017). I from here on follow Anderson (2014: 137) and the discussions of "affective atmospheres" in cultural geography. In cultural geography, this notion is employed by Derek McCormack (2018: 6) as both a "meteorological" and "affective" phenomenon, "a quality of environmental immersion that registers in and through sensing bodies whilst also remaining diffuse, in the air, ethereal" (ibid: 2008: 143). David Bissell (2010: 272) explores affective atmospheres in his discussion of the affective qualities of travelling on public transportation and considers them "perceived and sensed through the body" but does not

locate them beyond their "formation and dissipation" as part of the "ubiquitous backdrop of everyday life". Anderson (2009: 80) discusses their "ambiguity" and how he finds them "not unproblematically locatable" (ibid: 2014: 148) which reflects David Gandy's (2017: 354) discussion of them as paradoxically located in both specific and general urban locales as well as contained in "the wider dynamics of modernity". More recently, Steven D. Brown and his co-authors note Anderson's concern by considering cultural-geographic studies as lacking a "central object" through which "the most varied human and non-human phenomenon can be treated as affective" (Brown et al. 2019: 21). Both Anderson and Brown and his co-authors therefore suggest that conceptualisations of affect lack a "locale" and a way of describing the atmospheres of these different locales.

One way to explore the location of affective atmospheres is by observing how studies in cultural geography – including McCormack (2018: 5, 30) and Anderson (2009: 80) – draw on philosopher Peter Sloterdijk's (2005; 2011; 2014; 2016) philosophical "sphereology". The notion of sphere is central to Sloterdijk's re-writing of human history as a "spherological evolution" (Schinkel and Noordegraaf-Eelens 2011: 13), in his three-part magnum opus, *Spheres*. This evolution consists of "atmospheric-symbolic places" (Sloterdijk 2011: 46) constituting the "bubbles" in which perceptions and experience exist (in volume one, *Bubbles*); the orbs or "globes" which are traversed and conquered and through which an awareness of globalisation is explored (in his second volume *Globes*); and the "foams" made up of combinations or collisions of these micro and macro worlds as representing globalisation (in the third, *Foams*). Drawing on this, Anderson divides the word *atmosphere* and considers *atmos* as "qualities of feeling" and *spheres* in which feelings, much like Böhme's description of a haze, "fill volume like gas". Although Sloterdijk's idea offers an opportunity for us to consider the world as made up of designed atmos-spherical spaces in which people and non-humans are located, I wish to now reconsider this in relation to what Latour (2009: 142) considers an alternative design-led conceptualisation of globalisation – the actor-networks of actor-network theory. I do this despite the fact that Latour (2003; 2005) defers to Sloterdijk's theory in his brief discussions of atmospheres. This is because I believe that human-non-human scripts *form* spaces and therefore must hold affective atmospheres, as opposed to humans and non-humans existing *in* spaces. Moreover, we can overcome Sloterdijk's critique of networks as merely representing lines and nodes (Morin 2009: 67; Schinkel and Noordegraaf-Eelens 2011: 14; Sloterdijk 2011: 66-67; 2016: 257) and imagine these networks as, perhaps, spherical spaces and the circumference and space contained within them as made up of various densities of lines and nodes that people are "caught up in", affected by and an inevitable part of.

I believe that this idea is important to elucidate *and* locate affective atmospheres whilst

taking into account Böhme's (2017: 108) later description of atmospheres as "the manipulation of external conditions" through non-humans such as "furniture and spatial layout, music and lighting" combined with responses by people who change these atmospheres through "voice, intonation, speech melody, or pitch". In developing this idea, I use Brown and his co-authors paper in which they illustrate the development of the concept of atmosphere through discussing a series of photographs of the interior design of a psychiatric unit. In the first section, the boundary fence around the unit is described as often having contraband thrown over it. In the second, the staff feel "let down" by the quality of the build: a lack of natural light as windows are considered a risk by the administrators, and echo-inducing materials which disturb the patients' rest. In the third, the patients are described as "comfort eating" when entering the unit whilst the quality of the outsourced food results in arguments especially when the patients receive the wrong types of food. In the fourth, a patient is described as making "homely" cardboard fireplaces which foster a more social environment. Taken together, these examples demonstrate how the unit is a script made up of combinations of people and non-humans that hold affective atmospheres. Furthermore, these atmospheres are described in a way that indicates people's desire and attempts to repair them in relation to their expectations. In the second example, the staff are described as unhappy with the unit's design and materials which create an uncomfortable space for the patients. The first, third and fourth examples demonstrate how the patients attempt to change the atmosphere by introducing contraband, by the food they choose to consume and by creating cardboard fireplaces. This demonstrates that the staff expect the patients to sleep properly, which is frustrated by the administrator's expectations of the safety of patients. The patients, however, attempt to breach these expectations as they expect to consume the food that they choose and socialise with each other in what everyone seems to expect should be a more comfortable space. This indicates that the administrators, staff and patients are engaged in a constant process of making and unmaking the space in response to its affective atmosphere and in relation to their expectations of it.

I consider atmospheres more locatable in and as a result of human-non-human scripts thus extrapolating from Brown and his co-authors (2019: 21-22) suggestion of "place". I thereby consider a link between affect, atmosphere and the scripts in which particular interactions are constituted and from which we can learn of how people are affected due to their responses to them. I therefore further Brown and his co-authors suggestion that we act in "taking seriously the experiences of the persons who engage with the atmosphere" by giving credence to people through paying "close attention to the practices through which they are moved by and act back upon these conditions". Brown and his co-authors discussion connect with Margaret Wetherell's (2012: 19; 2013: 353; 2013b: 222; 2015: 57)

comments on these scholars' move away from "representational" semiotic or discursive readings to the sensational or "non-representational". Wetherell (2015: 149) considers this merely resulting in the description of affects in which people are considered "body parts" without "participant subjectivity" (2020: 28). To overcome this, Wetherell (2012: 4) suggests that we should consider people's "affective practices" to study what they do in response to affective atmospheres. This reflects Latour's (2004: 206) suggestion – which was taken up by Seigworth and Gregg (2010: 11) in their exploration of affect theory – that we consider humans as describable by paying attention to how they learn to be affected which is communicated through their "body talk" – practices which in ethnomethodology are considered as indicating people's expectations of the world around them.

I draw on this discussion to formulate a way of exploring people's responses to affective atmospheres. As already discussed, I suggest that "the most varied human and non-human phenomena" described by Brown and his co-authors (2019: 21) should be considered through actor-network theory's socio-material scripts. I also draw on my discussion of ethnomethodological breaching experiments in Chapter One, and how breaches often result in people either dismissing them through laughter as a joke or taking them very seriously (Garfinkel 1963: 202; 1967: 42). These situations do not only reveal what people do in response to affective atmospheres; people's expectations are inevitably revealed in response to them, too. Through this, I build on Latour, Wetherell and Brown and his co-authors, suggestion that we focus on how particular practices appear whilst at the same time exploring what these practice-responses tell us of people's expectations related to what they become in scripts. I therefore suggest that the "central object" that Brown and his co-authors (2019: 21) consider lacking from studies of affect are not the atmospheres themselves but breaching experiments which instigate these atmospheres which are responded to by people and which reflect what Wetherell (2012: 4) calls affective practices or what Latour (2004: 206) calls "body talk". Breaching scripts allow us to consider how and from where affective atmospheres appear and how people's responses are informed by this. Through this, we can understand these responses as part of people's self-presentation which allows us to understand what they expect of the world around them.

Atmospheres and presentations

As I have discussed so far, descriptions of scripts produce knowledge of designers, users, technology, individuals as well as how individuals are affected by affective atmospheres in scripts. I have, however, yet to take into account how scholars are affected by scripts and how, thereafter, they describe these scripts in text documents such as books or papers or PowerPoint presentations. In doing this, I engage with a well-known debate in the science

and technology studies community related to the design of the low-hanging overpass bridges on Long Island, New York. Technological determinist scholars describe these bridges as reflecting the racial prejudices of urban planner Robert Moses. This means that scholars associated with technological determinism consider the design and deployment of the low-hanging bridges as the embodiment of politics. Moses is considered as having purposely designed the bridges to stand little more than nine feet above the kerb to exclude the twelve-foot-tall buses used by the black or Puerto Rican communities, and thus exclude those people from the beaches of Long Island (Winner 1980: 123). These scholars subsequently discuss the bridges as having politics, that politics may have artefacts such as bridges (Joerges 1999) and that artefacts such as bridges are ambivalent (Woolgar and Cooper 1999).

Although the scholars discuss the bridges from a variety of theoretical positions to form the basis for descriptions of scripts, the various scholars were unwittingly enroled in and affected by the script of the bridges themselves. Descriptions of any particular standpoint in relation to the bridges can therefore be considered representative of scholars being affected by the design of the bridges. Through this, knowledge of the scholars' disciplinary training (ibid: 444), scientific ideologies (Gieryn 1983) and, pertinently, expectations of the world around them is communicated. It is possible to consider design such as this as representative of Garfinkel's (1963: 202; 1967: 42) breaching experiments in which design is implemented and, through this, breaches a pre-existing script, *and* scholars' expectations of the appropriate application of technology. The scholars describing and being affected by scripts must also be considered due to their making claims about the agency of designers, users, non-humans or the constitution of individuals in scripts. Scripts therefore produce knowledge of designers, design, the people using it as well as arrangements of such including the science and technology studies scholars describing them. This pertains to the breaching of scripts as eliciting scholars' personal or disciplinary expectations in PowerPoint presentations in academia, too.

The software package now known as PowerPoint was launched in 1984 for the Macintosh by Dennis Austin and Thomas Rudkin of a company then called Forethought, Inc. In 1987, Microsoft purchased what was then called "Presenter" (Gaskins 2012) and launched PowerPoint in 1990 with Windows 3.0. PowerPoint is now used in church sermons by priests (Robles-Anderson and Svensson 2016) as well as to present simplified knowledge by the military to "hypnotise" the journalistic press (Crean 2012: 337) or in military strategy, as demonstrated in Colin Powell's 2003 address to the United Nations regarding the Iraqi government's supposed stockpile of weapons of mass destruction. It is used in all forms of business (Yates and Orlikowski 2007) including by architects presenting architectural schemes to clients or publics (Stark and Paravel 2008), corporate designers who

communicate ethnographic research to represent other people who participate in their research (Nafus and Anderson 2010) and organisational strategists to communicate knowledge of organisational culture (Kaplan 2010). Moreover, NASA engineers may have their own approach to designing PowerPoint templates (Vertesi 2019: 373) for meetings which are ritualistically held each day (ibid: 375). In these meetings, PowerPoint might contribute to the oversimplification of maintenance reports which then leads to accidents such as the Space Shuttle Columbia disaster in 2003 (Tufte 2006: 162).

In this research, I'm interested in how PowerPoint presentations such as these are employed in academic settings, how presenters communicate scholarly knowledge in presentations and, how, in addition, without the scholars' explicit intention to do so, they communicate ideas about themselves as individuals (Wakeford 2006). I do this by considering PowerPoint presentations as typically expected scripts involving presenters, pointers, tables, chairs, audiences, notebooks, pieces of paper, computers, slides containing visual, graphic or other audio-video content and clothing including spectacles, coffee cups or sports drinking bottles. Furthermore, I take into account how scripts break down and modulate particular atmospheres which affect people and reveal their responses to these situations which inform us of their expectations of presentations. Latour's (1994: 36) discussion of the breakdown of an overhead projector during a presentation in a lecture is good example of this. In this example, Latour describes some people who, due to their arriving in the lecture theatre and repairing the projector, are constituted as "repairmen". It is clear that non-humans such as projectors breach expectations in scripts and through which presenters and other people including "repairmen" are affected. Responses to breaches of presentations therefore reveal knowledge of people's being affected in scripts which in turn constitutes their identities therefore revealing their expectations of presentations, themselves *and* the world around them.

Presentations and quasi-design

Throughout this chapter, I described scripts as involving various kinds of translations constituting interactions and individuals as well as affects and atmospheres. One way to consider this is by way of Garfinkel's (1963: 202; 1967: 42) breaching experiments, as I described in Chapter One. Scripts, once designed, manifest human-technical interactions later naturalised and which people eventually come to expect. PowerPoint presentations constitute what Garfinkel (1967: 35) refers to as "the world of daily life known in common with others and with others taken for granted". These "natural facts of life" are therefore "the product of activities in a real world" which eventually become people's expectations of such a world. As we have seen, expectations that are often performed, or in the case of

science and technology studies scholars, described, are not merely stable replications of human-technical scripts. A sense of normality, although directed by certain ideas or beliefs based on what people are seen to or actually do, are necessarily conceived of as such – *ideas* – that designers constitute, and science and technology studies scholars describe. But, no matter how thorough attempts at describing the perceived stability of scripts may be, these fluctuating situations represent inevitable change – the basis for new knowledge of the world around us.

These newly naturalised technologies therefore replaced prior ones, breaching and, as a result, affecting the lives of those in relation to them. This was evident in the design of Robert Moses' bridges on Long Island which I discussed in the last section and which apparently affected a local community as well as the scholars thinking about and thereafter attempting to describe these scripts. Similarly, PowerPoint software was initially designed, naturalised and accepted as a useful replacement for other types of presentation in knowledge-workplaces. Those giving presentations may conduct them in teaching or other situations whilst conforming to different readings of subjects related to different disciplines. Presentations will inevitably be differentiated in their design – including the arrangement and aesthetic experience of the room in which they take place, clothes worn by the presenters, supporting technology used as well as slides potentially containing an array of symbols or other imagery including but not limited to bullet points, fonts, images or other multimedia items such as video. As illustrated by Latour's example of a broken projector in an academic lecture, non-humans may behave unexpectedly and breach the expectations of those in relation to scripts, too.

Although designers designed the PowerPoint technology and therefore the script of PowerPoint presentation, there would be no PowerPoint presentation without the breaching of the PowerPoint presentation by other people wishing to give presentations. This continual breaching of scripts once designed by designers precedes the eventual acceptance of PowerPoint as holding use as well as meaning as part of particular organisations. Such significations, including the symbols, myths or stories through which society represents its past and present, give meaning, unity and coherence to how they are understood as real. In PowerPoint presentations, one might come to expect particular combinations of technologies including screens and computers that are used to present knowledge. It might be expected that presenters harbour different motives, capabilities, aims, tastes or desires which they reflect when giving presentations. One might also breach these expectations as a form of research. It is therefore possible to consider how breaching presentation scripts affects scholars. This may allow us to learn about these individuals' expectations as a form of design-led research where new knowledge of organisations manifests in responses by

people in these situations.

This type of research is situated between design and sociology, and therefore draws on both. In Chapter One, I outlined two different types of speculative design – Lupton's (2017) "sociology through design" and Marres, Guggenheim and Wilkie's (2018) "design through sociology". In this research I present a type of design-led social research by drawing on affirmative design, critical design and this reading of speculative design. I do this by extending explorations of design workshop-based breaching experiments (Poole 2012; Nilsson et al. 2019) by drawing on my conceptualisation of major and minor breaching experiments. Through this, I provide a distinct methodology which offers the opportunity for *one practitioner* to create and thereafter report on these new social realities as social research. In the next chapter, I formulate this proposal as an interdisciplinary research methodology. Specifically, I aim to produce a form of work that cannot be considered sociology inspired by design nor design inspired by sociology. My aim is to close the space between these fields whilst drawing as much on the work of designers as sociologists. Given the indistinct nature of this work, I will from here on refer to it as "quasi-design". In this sense, to be quasi is to be almost but not quite something. This might be understood as a practitioner who is neither designer nor social researcher but a quasi-designer who designs breaching experiments to breach and thereafter consider how people are affected, what they become and how their interactions appear in scripts. Through developing quasi-design, those in sociology might engage with the principles of design, and, those in design might describe design in unforeseen ways. More interestingly, engaging with quasi-design does mean, however, that I, from hereon, can only "be quasi".

Conclusion

In this chapter I first explored how design situates scientific knowledge presentation in research settings. I then defined design as the design of scripts, each of which are designed to have different levels of flexibility that constrain or liberate users allowing them different kinds of agency *within* socio-technical scripts. I noted that some scholars consider descriptions of scripts in actor-network theory in a way that gives importance and therefore agency to Machiavellian human designers. These designers are, however, more-or-less submissive and delegate more-or-less "agency" to users. This is an important point. I understand scripts as being *designed* to have different levels of flexibility that allow users to *feel* more or less agency in scripts. Through this, people identify with the designer-imposed programme of possibilities they see inherent in scripts. I then moved to explore the importance of what people identify with and *feel* in relation to what they become in scripts. I explored how we identify with and thereafter resist or adopt different identities in scripts

which also contain multiple future possibilities, too. After this, I outlined what I consider missing from the analysis of scripts – how people are affected by the atmospheres of scripts which thereafter define their interactions. I concluded by considering that this process involves scholars describing scripts and how scholars' descriptions represent their methods of presenting how they feel about scripts and therefore their expectations of the world around them. I then proposed a way of exploring the breaching of scholars' PowerPoint presentations in academic settings to reveal their expectations of scripts – a process I now move to outline as the methodology I use in this research.

Methodology: Quasi-design and presentations in academia

Introduction

The methodology described in this chapter is a form of research that explores breaching academic presentation scripts. This process involves simultaneously re-designing situations in which academics present knowledge in academic settings whilst producing knowledge of them, too. I first explore the context and relevance of this methodology to design, ethnomethodology and actor-network theory. I then outline the methodology as bringing together the notion of script and ethnomethodological breaching experiments thus contributing to the relationship between ethnomethodology and actor-network theory and design. I then outline the application of the methodology in relation to studying academic researchers' conference, teaching and mock interview presentation practices. Whilst outlining this, I discuss the production of sketches allowing for the initial exploration of issues of interest. I explore how I approach observing the relevant presentation situations, subsequently informing the development of a series of breaching experiments and follow-up discussions with the participants. Following this, I explain how I overcome any ethical issues faced whilst undertaking this research before extrapolating this methodology as a form of design-led social research. Through this, I further unite affirmative, critical and speculative design, ethnomethodology and actor-network theory. In other words, this methodology closes the gap between the disciplines of design and sociology. To conclude, I reflect on the implications of the methodology and its possible application as a form of design-led social research called *quasi-design*.

Breaching organisations

In Chapter One, I discussed how breaching experiments reveal people's expectations of design. In Chapter Two, I explored scripts as design and how breaching scripts reveals how people's interactions are affected by atmospheres and through which we learn of their expectations. In this chapter I use what we've learnt from these chapters to outline the quasi-design methodology as uniting actor-network theory, ethnomethodology and design. An important theoretical grounding for this methodology is provided by Akrich's (1992) script analysis and Garfinkel's (1963; 1967) breaching experiments. To develop these breaching

experiments, I extend recent explorations of breaching experiments as designed workshops (Poole 2012; Nilsson et al. 2019). This involves designing them to be appealing to my research participants *and* considering how to breach specific presentation scripts. Furthermore, in Chapter Two I suggested that breaching experiments are the central object of studies of affect and atmospheres (Brown et al. 2019: 21) and can be applied to scripts to explore how people are affected and thereafter respond to them (Latour 2004: 206; Wetherell 2012: 4). I therefore build on Marres, Guggenheim and Wilkie's (2018) sociology-led design and Lupton's (2017) design-led sociology to develop a method of social research that offers us the opportunity to go back and forth between these perspectives and explore how design can be used to both change and understand the world around us.

Breaching academic organisations

Sketches

Now I have described the aims of the methodology, this section outlines my initial engagement with the subject of this research – academics' use of PowerPoint presentation software to present knowledge in academic settings. Sketches, such as the caricature commissioned at the beginning of this research, are visualisations manifesting individuals' expectations of PowerPoint. By commissioning the caricature, I elicited a prominent British caricaturist's idea of PowerPoint presentations. As caricaturists often present complex subjects through a form of exaggeration which is resonant with many, the resulting caricature provided a vision of a PowerPoint presentation with characteristics informing the direction of this research. In the depicted presentation, a presenter wearing distinctive professor-style clothing makes a humorous presentation calamity whilst using the expected projector, screen, pointer, slides and bullet point combination. It is therefore clear that this image, although quite simple, informed this research by bringing to light various less typical aspects of PowerPoint presentations.

By extending this exploration, I created a film informed by the caricature which is called *Power Point*. This film is the first minor breach conducted in this research. As discussed previously, minor breaches differ from major ones in that the latter are often resisted or dismissed (Garfinkel 1963: 202; 1967: 47). In the film, eight professionals agreed to engage with a minor breaching experiment which involved their conducting a PowerPoint presentation about presentations, for which no time to prepare nor prior knowledge was provided. In the film, slides displaying images guide the interactions of the smartly dressed, often funny presenters. The sketches reveal not only interactions but the affective qualities of particular configurations of technology, images and clothing in presentations. Moreover, this film revealed the participants' expectations of this methodology. Whilst making the film,

many of the presenters were keen to express that they were enjoying the experience, in many cases considering it useful practice for presentations. This film therefore informed the development of this methodology in which breaching experiments are designed to be "useful" for the participants in the research. This reflects Marres (2012: 79) and Guggenheim and his co-author's (2018: 69) perspective on breaching experiments as useful, in particular, for participants self-reflection and through which they might benefit, too.

Observations

A key part of the methodology involves observing specific presentations in three academic settings. This is achieved by focusing on what in ethnomethodology are referred to as the "procedures" (Garfinkel 1967: 1) or "methods" (ibid: vii) used in the ongoing accomplishment of everyday activities. I, however, focus on both human and non-human agency, through which I take into consideration the principles of actor-network theory (Gad and Jensen 2014: 14). I do this by drawing on Akrich's (1992: 222) suggestion that the researcher's attention should be oriented to the patterned instability inherent in scripts (ibid: 166). This involves attuning my attention to the interactions and identities that appear in scripts. I also take in account the claim I made in Chapter Two that the central object that Brown and his co-authors (2019: 21) consider lacking in studies of affect and atmospheres is the breaching experiment which, when applied to scripts, allows us to observe what Wetherell (2012: 4) calls people's affective practices or Latour (2004: 206) calls "body talk". Breaching scripts allows us to consider how affective atmospheres appear and how people's responses are informed by this. I approach my observations by discussing the sketches I completed prior to them. What I observed in the sketches initially informed my observations of patterns of humour in paper presentations at the European Association of Science and Technology Studies conference; students' and lecturers' expectations of the use of particular technologies in lectures; and the prevalence of clothing specific to disciplines as relevant to mock interviews.

By attuning my attention to scripts in this manner, the observations in this research reflect those of the laboratory studies tradition broadly influenced by Sharon Traweek's (1988) report on the working lives of Japanese and American particle physicists, Michael Lynch's (1985) study of work and talk in laboratories and Latour and Woolgar's (1979: 29) study of scientists as a "tribe" engaged in rituals of knowledge production and communication. One might therefore assume this methodology is informed by Latour and Woolgar's (ibid: 278) drawing on the sociological figure of "the stranger" (Simmel 1921; Wood 1934; Schütz' 1944; Lynch 1985). I, however, refer to Dick Pels' (2013) interpretation in which observations are conducted in a way that is distanced from the academic activities

which are otherwise familiar to me as a doctoral researcher. I do this by maintaining procedures associated with design, with research foregrounding design as contributing to the presentation of the participating academics' knowledge. In this sense, I attempt to overcome aligning with a particular identity (ibid: 222) which, in this thesis, might constitute various type of "designer" or "social researcher". Instead, I encapsulate something *quasi* – something "almost" but "not quite" – neither designer undertaking social research nor social researcher undertaking design.

This type of stranger is therefore closer to Arpad Szakolczai's (2000: 92) discussion of Pierre Hadot's (2004) exploration of ancient philosophy in which philosophical strangers (1995: 57) do not inhabit "strange" research communities approached from an otherwise familiar position that is later returned to, but are seen as strangers who perceive and are perceived by the world as unfamiliar (ibid: 58). This stranger must therefore be considered as a "philosopher" accomplishing "philosophical exercises" (ibid: 206) as meditation on the "cultivation of self" (ibid: 81) in professional contexts such as academia and through which "a modification and a transformation in the subject who practices them" (2004: 6) takes place as well. As I conduct this research in academia, this study constitutes participant observation due to my being perceived a part of the community observed. My engagement with the European Association for the Study of Science and Technology (EASST 2018: 118, 137) conference was mediated by holding a workshop which was a part of the programme. I attended teaching presentations and mock interviews by contacting the lecturers and other staff members relevant to the observations I wished to undertake in universities, while being a researcher in a university, too. In each situation, I remained inconspicuous by making notes using a laptop and sound recorder as others attending such situations often do.

Quasi-experiments

The main method of data-collection in quasi-design are breaching experiments. To design these breaching experiments, I use the information gathered from the sketches and observations. I design the experiments in a way as to offer academics a method of practicing their presentation skills but through which I learn more of their methods in and expectations of presentations. When designing these experiments, I am first mindful of the rather controversial nature of breaching experiments in the social sciences. As I discussed in Chapter One, in many discussions of breaching experiments they are considered problematic due to their being imposed on research participants: they are considered anxiety-inducing and unethical (Mehan and Wood 1975: 113; Gregory 1982: 50) or are merely used to improve design (Crabtree 2004; 2004b; 2004c). Poole (2012) and Nilsson et al. (2019), however, use breaching experiments to explore home computing usage and maintenance. These

researchers do not impose new technologies or other disruptive interventions on their communities of interest but carefully design breaching experiments as "homework assignments" or speculative future scenarios which request that household owners install new technologies themselves or imagine *future breaches*. This reflects vom Lehn's (2016: 74) discussion of breaching experiments as "designed tutorials" and Marres (2012: 79) and Guggenheim and his co-authors (2018: 69) discussion of them as personal experimentation through which people can explore new ways of living. In this research I draw on these perspectives by designing some workshops in which the participants are made aware of breaches by drawing on my conceptualisation of major and minor breaches in Chapter One. These experiments, however, are not just experiments for me but for my research participants. They take the form of experiments in which participants explore or improve their PowerPoint presentation practices. Through this, I provide a distinct methodology which offers the opportunity for *one practitioner* to create and thereafter report back on the occurrences evident in these new social realities as social research.

To do this, I carefully attend to the design of the workshops in which people are in all cases informed of the occurrence of breaches. First, I take into account the useful nature of breaches evidenced in the sketch film *Power Point* and design these breaching experiments as a type of "useful" affirmative design through which participants can practice their presentation skills. Second, I make these workshops appealing to my audiences through the application of satirical humour inspired by critical design (Dunne and Raby 2013: 33, 40, 43; Malpass 2013: 343; 2017: 67; 113). Last, I carefully deploy specific breach interventions that are relevant to my social research interests. I therefore develop "training" situations that reference the widespread derision expressed towards PowerPoint for simplifying complex knowledge and through which I confront Garfinkel's (1967: 47) note that breaching experiments are often considered a joke. I unite affirmative and critical design to aid researchers in improving their use of PowerPoint. This results in the production of knowledge – this text – as speculative design. These experiments are therefore as much design as social research, hence, quasi-experiment. This research therefore sits between recent interdisciplinary studies situated between design and sociology, including design inspired by sociology (Law 2004; Marres, Guggenheim and Wilkie 2018) and sociology inspired by design (Lury and Wakeford 2012; Lupton 2017), perhaps as a design-led method of social research through humour (Davis 1993; Watson 2014; 2015; Cormack et al. 2017).

Each conference, teaching and mock interview breaching experiment was designed differently and increased in intensity due to how they were held. The conference activity involved proposing to hold a workshop at a conference. An unidentified breach, or "intervention" as I referred to it in the workshop description, was expected by the

participants and constituted a simulation enacted in the presence of each participant. This breach constituted a minor breach as everyone involved was aware of the occurrence and participated willingly. The teaching presentation occurred as a request for an intervention in a "real" teaching situation. Although the lecturers involved were aware of the breaches due to my discussing and requesting their enactment, concerns nevertheless became apparent. As I will explain later, another type of breach distinct from major or minor breaches appeared, through which we learnt about lecturers' expectations of lectures. The mock research interview breaching experiment was similarly deemed problematic by those I engaged with. Ultimately, this intervention was disrupted by a series of other major breaches as well as being entirely resisted by the participants.

Each breaching experiment I designed draws on observations derived from the sketches and observations. In these cases, I address academics' humour-led use of images to engage conference presentation audiences, the use of particular technologies indicating academics' expectations of their associated disciplines in lectures and the use of disciplinary clothing types to project professional values and personalities in mock interviews. I achieved this by formulating some breach interventions which include introducing new, unusual images, nostalgic technologies and disciplinary clothing outfits into each of the presentation scenarios. To render this humorous, I developed a series of hypothetical situations allowing me to justify each of the interventions. In the case of the conference, I described a scenario in which some ducks had swallowed storage drives containing participants' presentations which allowed me to introduce some "emergency" slides with unusual images on them. In the lecture, I planned to present the breach as the result of a problem with the pre-existing presentation technology during a busy day for the technical services department, who, having no time to fix the problem, offered instead a choice of out-dated technologies from a storage cupboard. And, in the mock interview, I planned to explain that a presenting researcher might hypothetically spill coffee on the way to a research interview thus allowing me to introduce some "clean" outfits.

Each workshop activity is similarly designed in two stages. The first allows participants to conduct the presentations as they choose. This is the situation in which I conduct my initial observations of the participants' presentations. These initial observations might be planned as the first stage of a larger two-part workshop or as a period of participant observations prior to holding the breaching experiments. The second stage involves participants facing a humorous breach and through which comparison between the first and second breached presentation is offered. Just as Garfinkel's (1967: 42, 45, 47) observations of breaches told us of people's responses, I similarly observe presenters being affected and yielding to scripts through which facets of individuals' identities and expectations of

presentation situations are revealed in the methods they subsequently employ. As we will see, some breaches are entirely resisted which nevertheless reveals data valuable for understanding presentation situations. Quasi-design therefore considers observations of scripts that are made accountable in sketches that reveal people's expectations of them. These then inform the observation of particular presentation scripts leading to the clarification of an individual's expectations through their repair of or resistance to breaches before or during workshops.

Discussion

Alongside sketches, observations and workshops, I engage in follow up discussions with research participants to corroborate my observations in each of the presentation scenarios. In these discussions, I reflect with the participants on the experiments as a form of design-led presentation improvement through my involvement as a designer. The experiments undertaken and discussants' experience of them and how they are useful therefore become the focus. In these cases, I am interested to hear how they are perceived, thought of and experienced which I then consider in relation to my observations. During these discussions – and in amongst other design-related discussions including how to better design presentations, or which university one's child should apply to study design – I was able to elicit information related to the participants' experiences presenting in the observations or experiment-presentations and how these might be considered a useful form of design.

Ethics

It was crucial for me to consider the ethics of this research before undertaking it. This sub-section outlines how I dealt with any ethical issues that arose, as informed by the British Sociological Association as well as the Design department at Goldsmiths. During this research, I harnessed my role as both designer and academic researcher to present a simultaneous design-led research activity on participant informed consent and information sheets. In writing the forms, I described the project as an investigation into the role of the designer in academic organisations with a particular focus on work practices, in particular, the use of PowerPoint presentations to present research in academic settings. Although described as research contributing towards my thesis, I foreground these experiments as design contributing a method through which participants might improve their presentation skills. As discussed previously in this chapter, I achieved this by designing the breaching experiments as a type of design activity (Poole 2012; Nilsson et al. 2019) that not only constitute experiments for me but for those participating in the research (Marres 2012: 79; Guggenheim et al. 2018: 69). This allowed me to address breaching experiments being taken too seriously or as

a joke (Garfinkel 1963: 202; 1967: 47). Furthermore, I overcame the previously mentioned ethically questionable (Mehan and Wood 1975: 113; Gregory 1982: 50) nature of breaches. I therefore created a humorous process of affirmative-design-led-self-improvement conducted for the benefit of my research in terms of design data collection or deployment (Crabtree; 2004; 2004; 2004c; Tolmie and Crabtree 2008) and for the research participants' benefit, too.

My use of breaching experiments emphasised that further care might be required regarding the experience of my research subjects. I was inevitably concerned that the use of breaching experiments might lead to the situation discussed by Sarah Williams and Frederick Klemmer (1997: 165) whereby Williams's attempts to study peers in cyborg anthropology settings were met with rebuttals. This potential problematic appeared in follow up discussions regarding the mock interviews in which sociologists speculated, "Yes, I can see what you want to know from the question there", perhaps in attempts to locate my "real" research interests before requesting a copy of a consent form "to see how you've framed the research on here". In the mock interviews, another researcher claimed to be nervous many times before suggesting mocks were worse than the real research interviews due to the involvement of peers. I was also reminded of other people's expectations of research ethics procedure, particularly regarding the distribution of informed consent forms. In one particular instance, I handed a consent form to one participant at what was deemed the wrong moment. I was immediately corrected by the participating academic. This revealed their expectations of my research as being similar to theirs, and therefore my status in that moment as a "peer", whilst also informing me that more than interactions appear in scripts including feelings such as nervousness, too.

I made sure to ensure that each participant was aware that the observations and discussions were a part of my research. These experiences, however, informed my limited use of recording equipment. Before each observation or experiment took place, I supplied the participants with a research consent form and information sheet and enough time to read them. I discreetly took notes and used a sound recorder whilst during the conference interventions I used a video recorder as well. Both sound and the rare video recordings were stored appropriately on an external hard drive whilst the information derived from these was used anonymously in written texts. In these texts, individuals are identified with invented names referring to their disciplinary alignment. I use anonymisation in this way to reference my own as well as the participants' academic interests. The invented disciplinary names therefore create a distinction between the ideas I discuss in this research, and those discussed by my research participants in the presentations that I observe.

This process demonstrates how I prepared to conduct this research ethically, in accordance with the stipulations of the British Sociological Association and the Design department at Goldsmiths. By outlining the focus of the informed consent and information

sheet, I demonstrated how researchers are informed of the subject straddling both design and social research. In this sense, I foreground the research as design whilst informing participants of its status as social research thus making use of, whilst alleviating the otherwise distressing nature of, breaching experiments through humorous critical design. In the informed consent form, these details are translated into first-person statements indicating the participants' understanding of and conscious agreement with the implications of their everyday work practices being observed. I therefore carefully attend to the broader concerns associated with this research as *quasi-design* undertaken by *quasi-designers* and through which a type of design-led social research distinct from other interdisciplinary types of research involving design or sociology can be undertaken.

Limitations

In this section, I outline the limitations of the quasi-design methodology as it is applied in this research. I also speculate on how some of these limitations can be explored in future quasi-design experiments. This is important as it relates to the central concern of this work which is to develop more ethical ethnomethodological breaching experiments. As discussed in Chapter One, I consider this research as "returning" to Denzin and Norman's (2003: 24-25) "blurred genres" moment in the history of qualitative social inquiry in which breaching experiments are of relevance. This moment involves researchers describing rituals and customs with "no privileged voice" and to "make sense" of them – a perspective ethnomethodologists refer to as "ethnomethodological indifference" (Garfinkel and Sacks 1970: 345). This means that my central concern is to conduct this type of work by developing more ethical versions of breaching experiments. I do this, specifically, by addressing the covert way in which breaching experiments are and have been conducted (Calvey 2008: 910). I consider this as responsible for how breaching experiments are often described as a disruptive method of social research (Mehan and Wood 1975: 113; Gregory 1982: 50) or merely used to enable design data collection (Crabtree 2004; 2004b; 2004c).

As also mentioned in Chapter One, this investigation does not explore another type of ethical consideration – what Denzin and Lincoln (2003: 25-26) refer as the "crisis of representation" and which concerns how researchers take into account people's differences, whether of gender, race or class. Simply, this means that I do not focus on individual biography to explain what appears in the experiments. The ways that people conceptualise their identities therefore plays no role in my analysis of what appears. Instead, I focus on describing people's methods, what this tells us of how they maintain breached situations and, how this can inform us of their expectations. Due to this, further questions are raised related to the context in which quasi-design is conducted, the scalability of experiments, and

what this means for the generalisability of the findings. As already discussed, the experiments in this research are all conducted in specific academic contexts. The first is a study of image use in academic conference presentations, the second is a study of technology use in mathematics and art history lectures, and the third is a study of fashion in university mock research interviews. The same experiment is not conducted in a variety of contexts and therefore contextual difference plays no role in my analysis of the findings. Neither do I vary the scale of the experiments. Each experiment is conducted without selecting different participants or contexts which might contribute to understanding the generalisability of the findings.

Although I am here describing the limitations of this study, this does offer a future trajectory for quasi-design. This may be achieved by developing an "ethics of care" for quasi-design. Briefly, this "moral perspective" was initially developed by Carol Gilligan (2008/1987: 471) and is "grounded in the assumption that the self and other are interdependent" and that action arises "in relationship" rather than from "within". This perspective understands "detachment from self and others" as "moral blindness" and insists on "respect for people in their own terms". Moreover, my research explores organisations as a multitude of scripts. I must therefore consider how, as María Puig de la Bellacasa (2011: 85-86) ponders, caring might affect the way we observe and present knowledge which, in this research, relates to the expectations of people and the "more-than human" (2017: 1). Future quasi-design experiments can therefore be designed to take into account these limitations. Of course, people of different sensibilities might respond to breaches in different ways and, due to this, "the breacher" may experience being "the breached". Similarly, moving one experiment to another or multiple organisational contexts – each of which hold different values, demands or policy climates – may similarly inform what appears. To scale-up the experiments, a variety of participants and contexts can be selected to explore the possible effect of this on the findings appearing in smaller-scale experiments. This research is therefore the first stage of the quasi-design methodology. The limitations described above indicate that there are three opportunities to explore quasi-design further. From this, the suitability (or lack of suitability) of using quasi-design with specific communities, in certain contexts and at particular scales, can be further understood.

Conclusion

In this chapter I outlined the quasi-design methodology by bringing together my exploration of design, breaching experiments and the notion of script in Chapters One and Two. Through this, I presented an interdisciplinary method of design-led social research called quasi-design. I first discussed how I draw on affirmative, critical and speculative design to design humorously

engaging breaching experiments which are useful as a form of academic knowledge production. Through this, academics' expectations of PowerPoint presentations in conference, teaching lecture and mock interviews can be understood. I discussed the first part of this method as involving the production of sketches. This included the caricature introduced at the beginning of this thesis and the film *Power Point* I discussed in Chapter One, both of which allow me to explore initial areas of interest related to the PowerPoint presentations given in workplace settings. I then discussed how I go about observing conference, teaching lecture and mock interview presentation scripts. Specifically, I discussed taking into account how interactions and the affective and atmospheric qualities of scripts are constituted. This discussion informed how I develop breaching quasi-experiments for those participating in my research by outlining the design of breaches that are personal experiments contributing to my research participants' presentations, too. Furthermore, in this discussion I provided information as to how I ethically inform people of these breaches and how I overcome the critique of the use of breaching experiments as unethical and their potentially being considered either a nuisance or a joke by those taking part in them. The next three substantive chapters explore the application of this methodology and how it can be used to reveal new knowledge of academics' presentations conducted in conferences, lectures and mock interviews.

Technical difficulties: Atmospheres in conference presentations

Introduction

Academic conferences are platforms for the presentation of scientific knowledge *and* situations in which academics socialise with other people who are a part of their professional networks. As a result, the collective identity of the academic communities who maintain academic organisational cultures are formed. But what methods do academic researchers use to bring knowledge into being in these communities? How do academics move their research projects forward and build allegiances with other academics in academic conference settings? This chapter focuses on researchers' methods of building and maintaining relationships with their peers in scientific conference presentations. Specifically, I focus on how design and humour are used by researchers to appeal to their audiences. I do this by describing a workshop I held at a conference that explored breaching researchers' academic conference presentations. In this discussion, I first focus on the similarities and differences between the presentations given by the four participants in the workshop breaching experiment. I then discuss the minor breaching experiment I used to intervene in the participants' research presentations. This experiment involved changing the workshop participants' presentations by introducing some unusual imagery, through which their methods of appealing to their audiences were made visible. I designed eight sets of presentation slides of particular aesthetics and explored how these slides were used by the researchers to modulate the atmosphere of their presentations. I conclude by considering the affective qualities of academic conference presentations, and the workshop, an example of studying interactions *and* atmospheres in what I thereafter refer to as *quasi-scripts*.

Scripts and humour

In this chapter I build on my discussion of breaching experiments in Chapter One, scripts in Chapter Two and how breaching experiments can be bought to bear on scripts as quasi-design as outlined in Chapter Three. Specifically, I report on a conference presentation breaching experiment I conducted as a workshop at the 2018 European Association for the Study of Science and Technology conference themed "Meetings: Making science, technology and society together". In the workshop – which was listed on the conference

website and in the programme schedule and list of panels (EASST 2018: 118, 137) – I asked the participants to present a five-slide presentation of their research interests. During these presentations, which I did not see prior to the workshop, something surprising happens to the scripts (Akrich 1992) holding them together. In the listing, I described the workshop as addressing the transformation of conference presentations through overcoming a "technical difficulty". I was, however, also subject to a variety of other conference scripts, through which I would avoid any other conference "technical difficulties", too. Typically, science and technology studies conferences follow the well-known scripted format of other scientific conferences. A programme publication includes information on where the participants may register for the conference, visit book exhibits, take advantage of evening catering offers or celebratory banquets, or sleep in the accommodation provided, as well as access sightseeing information. Themed sessions typically last for ninety minutes, in which papers lasting ten to twenty minutes are presented, and after which there are breaks of either thirty minutes for coffee or one hour for lunch. The conference organising body expects that those organising these activities will do so as agreed, and those attending the conference expect that these activities will occur as listed in the conference publication and on the website.

When I applied to, prepared for and held my conference workshop, I also adhered to particular scripts, much like the conference organising body and the workshop participants. The organising body expected that I would pay the conference fees through an online website or administrative e-mails would appear in my e-mail inbox informing me that I was not welcome at the conference. The conference organising body delegated a day, time and room in which I was expected to hold my workshop. I expected that this room would contain fully functional technology including a projector and screen as well as the ability to connect the projector and screen to a computer. The workshop participants who registered for the workshop using the Google Forms document I compiled expected that they would find the workshop occurring as per the programme schedule. I expected that some, if not all of these registered workshop participants would attend, given that they had registered for a limited number of spaces. Furthermore, the conference organising body placed an instruction in the conference publication which requested that the conference panel and workshop organisers should not alter the order of the panels or workshops as some conference participants expect to "panel hop" (EASST 2018: 12). Through this, we can see how the conference is made up of a variety of scripts each of which rely on each other's proper functioning for the proper functioning of the whole conference.

When certain scripts do not hold together and they begin to break down, a series of other interactions occur. For instance, Garfinkel (1963: 202) notes that humour is often used as a method of resolution when scripts are breached and face collapse. Garfinkel explored

this in a game of tic-tac-toe in which players were asked to mark their gameplay moves whilst Garfinkel's students broke these rules by removing the other players marked moves when making their own. When these irregular moves were noticed by the other players, confusion ensued, and they then attempted to normalise the gameplay conduct by correcting the perceived error or assuming the irregularity and turning the game into a joke. The players therefore collectively experienced the divergences as humorous and created a new type of gameplay conduct and re-asserted everyone's trust in the new gameplay protocol (ibid: 206). In one of Garfinkel's (1967: 47) other breaching experiments, students were asked to enact the role of a lodger in their own homes. Garfinkel reports that the increasing level of formality displayed by the students towards their familiar environments elicited expressions of anger and bewilderment or resolve to rationalise the otherwise unusual behaviour as a prank. In one instance, family members were reported as experiencing a strange scenario as humorous and through which the expected once-shared social reality, or script, was maintained.

Humour is also often used to maintain breached scripts in typically humourless science settings. Nigel Gilbert and Michael Mulkay (1984: 174) describe humour in the scientific community as the outcome of recognisably incompatible references in jokes. The authors do this by considering what they refer to as proto-jokes in biochemical laboratories (ibid: 178). These jokes are described as printed lists of phrases that are pinned to science laboratory noticeboards. On one side of the list is a phrase that pertains to formal scientific literature, and on the second side, the informal equivalent. Gilbert and Mulkay give the example of one of these lists titled a "Do-it-yourself CERN Courier writing kit" which contained a "Conference Glossary" listing phrases supposedly used by scientists at conferences. In the glossary, phrases such as "we have a tentative explanation" are translated as "I picked this up in a bull session last night". Incongruity is therefore fostered by scientists indicating that their use of humour mediates their ability to undertake scientific work in teams. Through this, teams of scientists are united in a shared experience of humour through which good working relationships are fostered and the scientific organisations in which they work hold together and are maintained.

Katie Vann (2010) describes humour in science via Isabelle Stengers' book *The invention of modern science* (2000: 57-70) which itself draws on Gilles Deleuze's discussion of humour and irony in *The logic of sense* (1990: 134). I understand this type of humour as distinct from what Ian Hacking (2000: 19-21) refers to by discussing the work of Richard Rorty (1989: 73) and Karl Mannheim (1925/1952: 140) as a reference to an "inevitable" phenomena one is reticent towards or a type of "unmasking" of ideas in order to undermine them – types of irony that Woolgar (1983: 240) suggests are often used in the social sciences. I understand

humour in relation to immanence which Isabelle Stengers (2000: 65) suggests unites people in a shared experience. Latour's (1994: 36) description of a broken overhead projector in an academic lecture is a clear example of such a potentially humorous scenario all academics and other knowledge workers are familiar with. Latour does not, however, note the experience of this type of situation and only describes how the "repairmen" systematically repair the broken projector. Latour does not therefore consider how the presenter might use humour to communicate with or mediate the audience's disappointment during this unfortunate event. Neither does he consider how the presentation audience might find the rather common breakdown humorous and through which they all share a moment of humour whilst the repair people repair the projector and, with this, the presentation script.

Michael's (1996c: 167-168) account of the advertising of technical gadgets, however, suggests that humour is often used to maintain scripts. Michael describes an advertisement advertising a technical gadget called "Snorebuster". The gadget is advertised in a black-and-white newspaper advertisement to appeal to those who share the experience of sleeping next to a snoring partner. Michael considers how humorous shared moments maintain particular scripts and, how new technical gadgets are inoculated from ridicule by consumers who may otherwise find them ridiculous. Michael discusses the simple newspaper advertisement as designed in a particular way to emphasise its humorous nature. The title, set in a bold font, has an explanation mark at the end: "Enjoy a good night's sleep with Snorebuster!" Not including "the" in the sentence here renders the device a type of friendly-sounding cartoon character akin to those found animated in Disney-Pixar movies. Below this, a short description of Snorebuster states: "We all know how irritating it can be when our partner starts to snore, well, here's the solution...". After this, the description focuses on the object, its function and capabilities. Below, an image of someone asleep wearing Snorebuster, with their arm on a bed, is overlaid with an image of the device – the desired image of the otherwise humorous situation now peacefully resolved.

Now that I have considered how humour is used to maintain and avoid ridicule in scripts, I now consider the use of humour to repair breached conference presentation scripts. As Donna Haraway (1988: 593-594) considers humour a useful form of appeal to disciplinary allies, conferences can therefore be considered ideal platforms to understand individuals' methods of avoiding ridicule and appealing to audiences during presentations. Anthropologist Larissa Lomnitz (1983: 2) describes "scientific meetings" as one of the domains in which scientists engage in the presentation of knowledge which is requisite for membership to the scientific community. In these conferences, academics are socialised into particular communities who trade knowledge in differently configured presentations. To

present their knowledges, scientists engage in poster sessions, workshops, roundtables, plenaries and the presentation of papers using Microsoft PowerPoint – all of which involve techniques of visualisation including the use of imagery. As images are deployed by researchers to form networks of allies in the scientific community (Latour and Woolgar 1979; Latour 1986b; 1987; 1990; Traweek 1997 Henderson 1999), images in differently configured presentations pertain to the constitution of networks of relations between peers as well as the scientific community at large.

Presentations in conferences are also platforms through which personal, disciplinary and organisational reputations are disputed, negotiated and upheld. This is indicated in the order of papers presented, including, more obviously, at award ceremonies (Lomnitz 1983: 5). Informal settings such as corridors, social events, parties, discos, the pubs or restaurants of the host cities and even saunas in hotels (Mills 1987: 26-31) play a role, where individuals' knowledge, ideologies and disciplines are further discussed. Harry Collins (2004: 451) notes the importance of meetings in informal settings during physics conferences in his book *Gravity's shadow: The search for gravitational waves*. In these situations, "tokens of trust" are apparently exchanged and are considered a key component binding the scientific community together. The presentation of scientific knowledge in natural and social science conferences can therefore be considered a result of experiences in designed formal or informal settings. Activities including the use of humour therefore contribute to the development of trust between scientists and their audiences and through which they are united in what they feel is a shared professional experience.

The breaching of scripts in scientific conference settings, however, provokes a variety of other responses including resistances or repair. Albert Mills (1987: 25) describes attending a British Sociological Association (BSA) conference in Cardiff and leaning over to kiss his wife on the neck during a plenary presentation. Finding himself "violently prodded in the back", a deviation from the "deadly serious" order of proceedings was resisted and then repaired by the chairlady of the British Sociological Association sitting behind him. Breached scripts are also overcome through humorously communicating an awareness of a breach. Deborah Heath (1998: 85) describes this through the use of an anonymised image of Abraham Lincoln displayed on a presentation slide at the Society for American Cell Biology conference. The image of Lincoln dressed in underwear had a black bar placed across the eyes so that it appeared to abide by issues of patient confidentiality. Lincoln, however, remained recognisable due to his facial structure and beard. An "enduring contradiction" therefore rendered the image humorous and so no opportunity to consider the un-anonymised image as needing correction, or to point out that anonymisation was not necessary, was presented. Atmospheres of humour therefore suture members of academic conference communities

together during breaches of otherwise expected conference presentation conduct.

As mentioned previously, scripts are also breached by the failure of non-human objects such as projectors (Latour 1994: 36). Hubert Knoblauch (2012: 145) discusses one such "technical disaster" at the 2004 Zoll German Customs Chemistry Conference which demonstrates the breaching of a presentation due to a technical failure. A presenter, having arrived at the conference with their presentation slides on a storage drive, realises that the drive is incompatible with the computer used in the presentation space. This presenter is therefore no longer a "speaker" but "someone in need of help". Alexandra Supper (2015: 448) similarly notes the malfunctioning of sound files at the International Conference for Auditory Display (ICAD) where a presenter was seen "fumbling" at the side of a laptop and "making excuses". Sergio Sismondo (2018: 110-111), however, describes a "clean cut" professor at a drug industry conference describing an incident with a cat and laptop as leading to the loss of their presentation. In the latter case, a humorous atmosphere inoculated the presenter from ridicule during a technical difficulty through a description of the difficulty to an academic community who will have experienced such difficulties themselves. Humorous atmospheres therefore act as a form of affective self-correction that allow people to overcome technical difficulties and maintain conference presentation conduct.

As discussed in Chapter Two, the notion of affect is important to understand the relationship between affect and atmospheres which I argue appears in human-non-human relations or scripts. Although Brown and his co-authors (2019: 21) claim that current conceptualisations of affect and atmospheres lack "any generally agreed definition of the central object" and Wetherell (2012: 4) and Latour (2004: 206) suggest that we should consider what people do in response to these atmospheres, the presentation technical breakdowns discussed in this chapter provides an opportunity to study people's responses to humorous atmospheres in scripts. I am particularly interested in how the appearance of atmospheres in specific locations that I understand as scripts might not only be located but through this understood in more detail. Specifically, I'm interested in how academics go about changing or modulating the particular atmospheres that appear in presentations and how scripts can therefore be understood as affective. In doing this, I raise the question as to whether scripts merely manifest particular interactions, or, whether they affect individuals, thus guiding their interactions in them, too.

By taking this into account, it is possible for me to extend Latour's discussion of the broken overhead projector. For instance, as the bulb in the projector blew unexpectedly, the presenter preparing to give the presentation was *shocked* at this breach of the audience's expectations. Moved by the loud "pop" constituting an atmosphere of *alarm*, the presenter

modulated an atmosphere of *frustration* by saying: "not again!". In response, the audience felt *surprised* by the situation thereafter laughing and finding the disruption *humorous*. The presenter, although casting themselves as a clown, shared the moment of *humour* with the audience whilst also feeling *concerned* about the lack of an available projector before the audience's upcoming exams. As the technical services staff were themselves *concerned* – as demonstrated by their rushing through the door of the lecture theatre – the presenter experienced an atmosphere of *relief* and found another moment to share *humour* with the audience. In this short example it is clear that scripts are rendered atmospheres during breaching. This is markedly differently from Latour's description of the technical services personnel appearing through the door of the lecture theatre. In this description it is clear that atmospheres of alarm, frustration, concern or humour are modulated, and inform the types of interactions that take place in breached scripts. Now that it is clear that scripts hold affective qualities which are thereafter modulated by people, I now move to my case study – a workshop I held at the European Association for the Study of Science and Technology conference called *Technical difficulties: Visualising knowledge and the transformation of academic conference presentations*.

The setting of a scientific conference

The Bailrigg campus of Lancaster University hosting the conference is on the outskirts of the city of Lancaster in north-west England. Lancaster is one of several universities created in the 1960s after the Second World War during a time of rapid population growth and technological change. Holding a reputation for fostering the public understanding of science and technology, the university is home to the Centre for Science Studies, Centre for Gender and Women's Studies and the Institute for Social Futures. The campus is interspersed with ponds and fountains complete with a resident flock of ducks – their quacking and squawking reverberating in the courtyards. The car parks contain red and white triangle signs indicating that being an ethical driver (Latour 1994: 38) constitutes being mindful of the human as well as the duck-pedestrians wobbling around seemingly looking for pieces of food on the campus floors.

The workshop was hosted in a room in one of the buildings in the centre of the campus, typical of seminar-room spaces found in universities. Its white walls displayed empty grey pin-boards and a thick black-framed projector screen. The white plastic projector suspended from the gridded waffle ceiling projected a holding screen advertising the projector's manufacturer. The monitor of a black Windows PC was connected to a grey media table with a heavy base next to which another table, probably ordered from a commercial furniture catalogue, displayed a scruffy plywood table-top lectern. I placed an Apple MacBook Pro

laptop on the media table, replacing the Windows device for running the workshop. I then arranged twelve chrome-framed chairs with blue fabric upholstery in a semicircle facing the screen. These chairs eventually seated nine participating academics, bringing with them varied interests in science and technology studies from Norway, Denmark, the Netherlands, UK and USA.

As a doctoral student in design, I was expected to hold a certain expertise in the graphic designing of PowerPoint slides. This was indicated by one attendee leaving my workshop for another after I clarified that the workshop was about image use as opposed to presentation slide design. Standing at the front of the room, I carefully explained that the workshop involved exploring the use of images in a simulated conference panel session. I also explained that four volunteers would be required to take my place at the front of the room and present the five-slide research presentations they were asked to bring to the workshop. Thereafter, I explained that this would be followed by a second phase – the enacting of a "technical difficulty". The screensaver on the laptop I was using then unexpectedly sent the projector to sleep, displaying the projector's holding screen. This was pointed out by one participant in amusement as another type of technical difficulty. As I attempted to reclaim the situation, I explained that during the second phase of the workshop, we should imagine that the ducks on campus had mistaken our accidentally dropped storage drives for food. I will then come to the rescue of the irretrievably ingested knowledges, I said, which will be enacted again with some other slides I have designed, thus, resolving the technical difficulty.

Scripts in conference presentations

As we have learnt, academic conferences and the presentations within them are held together through designed scripts. Reflecting this, each of the four presentations given during the first part of the workshop, and which I had not seen prior to this, were structured similarly. The first presenter, Dr. Innovation, a doctoral researcher in science and technology studies who had originally trained in physics, presented research concerning the study and optimisation of intervention in innovation and advanced research in the space industries. The second presenter, Dr. Dementia, a post-doctoral research associate in anthropology, discussed the visualisation of research in dementia neuroscience and synthetic biology project management. The third presenter Dr. Interdisciplinary, a professor in science and technology studies and bioscience strategist, spoke of an interdisciplinary study of synthetic biologists. The last presenter, Dr. Space-age, a sociologist of health and illness, presented on space colonisation projects developed in the technology industries.

Each of the presentations began with a title slide. This indicated a particular script associated with conference presentation design and rendered an atmosphere of formality.

Dr. Innovation used a title slide containing four logos of their associated organisations at the top, a centre aligned title, their name in black sans-serif font and their associated university website contact details in blue – a hyperlink to a webpage. Dr. Dementia's left-aligned title was set in both bold and regular font in white on a black rectangle cut at forty-five degrees below which their name, university and department were adjacent to images of purple coloured bacteria cells and a scientist wearing purple latex gloves holding a brain above a large knife. Dr. Interdisciplinary, much like Dr. Innovation, had the logo of their associated university at the top of the title slide in a navy-blue bar whereas the rest of the slide displayed the title in regular weight sans-serif font. Below this, their name, e-mail address and the title, location and date of another conference in Finland was listed. Dr. Space-age commenced their presentation using a marine-blue background across which their name in large-scale bold white sans serif font was displayed. An animation also played on the slide – white circles pulsing outwards, akin to the ripple of a pebble dropped into a pond.

Continuing the formal atmosphere, Dr. Innovation, Dr. Dementia and Dr. Space-age outlined their research interests as specified topics using the same structure although their interests were different. Slide two was used to outline the details of their research. Using slide three, all spoke of the context of their research – the space industries, dementia neuroscience and synthetic biology laboratories and the commercial technology industries respectively. All used slide four to analyse what their projects aimed to do – categorise methods of intervention in space innovation, critique scientific visualisation practices and space colonisation agendas. Addressing the potential of their projects, side five was used to discuss the application of innovation interventions, yet-critiqued areas of scientific visualisation and the unanticipated effects of space colonisation practices on other industries. Apparently not counting this or their title slide a slide, Dr. Innovation used a sixth to discuss the future of their research before moving on to a seventh. In this moment, they briefly looked at me as if experiencing an atmosphere of anxiety, perhaps expecting that I would enact a form of regulatory language to repair their conduct as discussed by Betty Lou Dubois (1981) in her paper "and the last slide – please".

Whilst the components constituting the script of the scenario remained the same – the chairs, the table, the computer and the people in the room – a slide similar to the title slide was used by Dr. Innovation to enact a *trans-atmosphere*. Trans-atmospheres are a moment of atmospheric transition when one atmosphere is re-modulated as another by a person or event related to a particular script. In this case, the refusal of the existing and the subsequent modulation of one atmosphere to another was constituted by Dr. Innovation's use of a slide displaying the words "THANK YOU & QUESTIONS?". This

particular interaction was made visible by Dr. Innovation appearing to experience an atmosphere of anxiety due to using more than the five slides I had specified. Dr. Innovation thereafter looked to me for reassurance after which I nodded, thereby modulating an atmosphere of reassurance and through which the presenter was assured this was acceptable. This suggests that atmospheres derive from arrangements of objects in space and are modulated in response to and through interaction with a key component holding scripts together. Due to a presentation slide containing information then performed by a presenter, we can consider slides key components of the wider array of actors constituting the presentation script. The presenter is then affected by and transforms the atmosphere that might otherwise be considered dictated by the specified number of slides. This illustrates that slides are key to scientific conference presentation scripts in which the modulation of atmospheres plays a vital role, too.

Dr. Interdisciplinary took a more personal approach by presenting their interdisciplinary method of working with synthetic biologists. Slide one was used to describe never having wanted to be confined to a specific discipline. Slide two was used to discuss their affiliated disciplinary contexts – outlined on slide three as biology, psychology, anthropology and philosophy. Slide four outlined the sub-disciplines – science and technology studies, history and philosophy of science and science policy – then again on slide five the broader disciplinary fields of natural science, social science and the humanities. Slide six and seven were used to talk of their research method by referencing Marx and describing themselves as "a biologist in the morning, an anthropologist in the afternoon, an engineer after dinner and a philosopher in the evening". Slides eight and nine were used to talk of the potential of their research to offer the opportunity to study the same object from multiple perspectives. Each script contained different human presenters presenting different research interests using different images on differently designed numbers of slides, as well as, in Dr. Interdisciplinary's case, personal narrative structure. Conference presentation scripts, although similar, are never fixed but are fluctuating arrangements indicating the appearance of multitudes of new scripts we nevertheless understand as presentations.

Conference presentation design

This section explores the fluctuating nature of the scripts of the four presenters' presentations. The images used in the design of the slides of the presentations produced a "public image" (Gieryn 1983: 781) of the presenter's research. This suggested that the slides were designed to appeal to particular audiences through which funding or employment opportunities may be acquired. Similarities between those of Dr. Innovation

and Dr. Interdisciplinary, affiliates of the same university and both defying the five-slide rule, and between those of Dr. Dementia and Dr. Space-age, also appeared. Technical images such as diagrams and charts were used by Dr. Innovation, and Dr. Interdisciplinary used text and abstract diagrams. Dr. Dementia used a vast array of images on differently designed slides and Dr. Space-age used slides which had been designed as if typography and colour coordination had also been considered. Moreover, similarities between Dr. Dementia, Dr. Interdisciplinary and Dr. Space-age appeared in the affective qualities of their presentations. In the case of Dr. Dementia, self-criticism was used to modulate the atmosphere of, and therefore enable the presentation of, research in critique of the synthetic biology and dementia neuroscience industries. Dr. Interdisciplinary and Dr. Space-age used humour to similar effect. Images and attempts to modulate the atmosphere of the presentations here constitute the presenter's methods of appealing to the scientific audiences they operated to critique as well as the peers they aimed to form allegiances with.

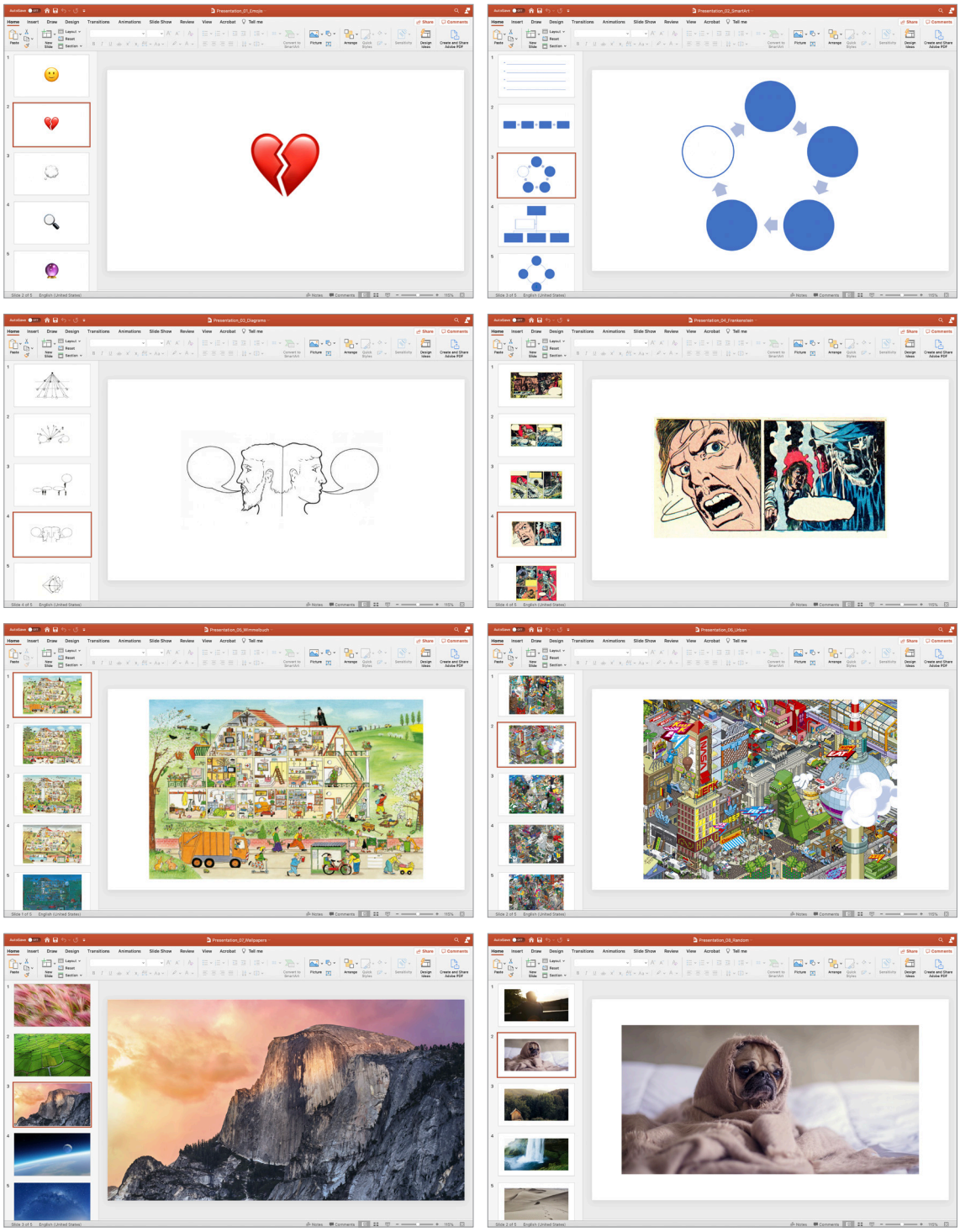
Dr. Innovation mainly used black and white diagrams which reflected their training as a physicist, given the typical use of images described by Sharon Traweek (1997: 106-107) in her paper "Iconic devices: Toward an ethnography of physics images". Four diagrams akin to trunkless deciduous trees having lost their leaves for the winter were used to outline the actors associated with the research on slide two. A diagram made up of two three-dimensional curved grey arrows was used to connect a photographic image of a university building and a cartoon-like faded grey padlock next to two triangles with rectangular boxes stacked inside them – supposedly commercial organisations. This image made up of other images appeared to indicate a joke regarding the "unlocking" of research projects for use by those in industry settings that, perhaps, might be resisted by academic researchers. Lots of little boxes such as a blue, grey and white Excel spreadsheet constituting the categorisation of their research object that covered slide four also reflected those prevalent in physics presentations (ibid: 105-106). A diagrammatic representation of grey circles and blue rectangles oriented like diamonds was used to outline the possible application of these categorisations in industry settings. A network of dots and lines was then displayed which apparently represented the possible application and effects of their research in industry.

Dr. Dementia used charts, diagrams and other images in their presentation, although the most noticeable and consistent feature of their presentation was the modulation of an atmosphere of pity which was projected through self-criticism. The presentation contained three images – an ouroboros, a Möbius strip and an image of planet earth in an unlit sky with a network of lights connecting cities. The presenter referred to the last of these when

critiquing their own use of stock images in presentations. Slide three, an image of a project management timeline overlaid by images of a laboratory shelving unit and two diagrams contained in white circles, was used to critique their own ability to manage time. An image of another PowerPoint presentation was then used to critique their own attempts at visualising research beyond PowerPoint – which was unfortunately not possible in this workshop. The last slide displaying a series of pharmaceutical product advertisements illustrated the possibilities of their subject area, before concluding. At this point, they uttered, "presentations are not my thing" in what Betty Lou Dubois (1981) refers to as "the management of pity" through the use of particular lexical and syntactic preferences, in this case, in the re-direction of critique to themselves as opposed to their research community.

Dr. Interdisciplinary and Dr. Space-age used comedy and jokes in attempts to modulate the atmosphere of their presentations and inoculate themselves against ridicule. Dr. Interdisciplinary rendered an atmosphere of comedy by opening their presentation (which the slide suggested had been previously presented elsewhere) by saying "thank you for the opportunity to speak at this science and technology studies conference in Tampere, Finland" – and by referencing Marx – both to smiles and chuckles by the audience. Similarly, the audience displayed mild tittering in response to images of the technology entrepreneurs on screen and in response to Dr. Space-age making jokes about technical difficulties thus rendering an atmosphere of humour outside of their allotted presentation – when the laptop screen changed during my explanation of *Technical Difficulties* at the beginning, during Dr. Innovation's extended fumbling at the side of the Apple laptop in preparation for their first presentation and also noting that they were themselves "enacting a technical difficulty" in failing to open their slides when preparing for their presentation. The presentation of academic knowledge also involved insulation from criticism by presenters through, in the case of Dr. Innovation, the use of pictorial images or diagrams reflecting the industry setting they researched. Dr. Dementia used pity as an attempt to appeal to audience's emotions. Dr. Interdisciplinary and Dr. Space-age used jokes about the workshop and technology entrepreneurs in order to inoculate themselves from ridicule. Having learnt that design alludes not only to presentation slides and images but the atmospheres of conference presentations, the next sections explore an intervention in the participants' presentations involving the re-design of their presentation slides and how these slides were used to change the atmosphere of their presentations.

Breaching conference presentations



4.1: The sets of slides I designed for the *Technical Difficulties* workshop.

Part two of the workshop involved the participants enacting a breaching experiment involving a technical difficulty. During this time, I requested that the presenters re-present their original research presentations using one of eight five-slide PowerPoint sets that I had designed. Prior to their doing so, I gave the participants a workbook containing the

new PowerPoint sets. In the workbook, each slide of each slide set was shown together in a grid formation on one page. The separate slides making up these slide sets were then displayed separately on the following pages. Underneath each of the separate slides, I supplied a space for the participants to prepare, through writing, what they wanted to say using each slide. The first set, *Slides 1. Emojis* contained the smiley, broken heart, magnifying glass, thought bubble and crystal ball emoji symbols. *Slides 2. SmartArt* contained one of four text-less diagrams designed using PowerPoint's 'SmartArt' feature. *Slides 3. Diagrams* contained diagrams taken from Bruno Latour's (1987) *Science in action* that I had edited to remove the text. *Slides 4. Frankenstein* contained similarly edited frames taken from the 1972 issue of Marvel Comics *Frankenstein the Monster*. *Slides 5. Wimmelbuch* contained images of the same house taken from five of Rotraut Susanne Berner's wordless children's picture books. *Slides 6: Urban* displayed a series of urban landscapes created by the pixel art group E-boy. *Slides 7. Wallpapers* had on each slide one desktop wallpaper supplied with Apple's Sierra release of the Mac operating system. I designed each of the sets to allow me to observe the participants' choice of slides. I only used images to design the slides as this allowed me to consider how the images might be used by the presenters to re-present their original presentations.

The first way I designed the slides took into account their appeal to my audience. Given that the workshop took place in an academic conference in which knowledge is presented in time-limited presentations of, typically, five slides, I decided to offer a level of humorous critical design-esque satire (Dunne and Raby 2013: 33, 40, 43; Malpass 2013: 343, 2017: 67; 113) by suggesting the simplification of knowledge in presentations. *Slides 1. Emojis* displays symbols used for shortening text-messages and which already stipulate word limits. *Slides 2. SmartArt* and *Slides 3. Diagrams* both contain diagrams devoid of text and are open to interpretation. *Slides 4. Frankenstein, Slides 5. Wimmelbuch* and *Slides 6. Urban* involve cartoon images derived from products targeting teenagers, young children and young adults respectively. The penultimate set, *Slides 7: Wallpapers,* is made up of the highly digitised desktop wallpaper images and *Slides 8: Random* has on each slide an image selected through an online random image generator.

The second way I designed the slides took into account their gradual reduction of their directive for presenters. This offers the opportunity to observe how and why each participant chose their slides in relation to their research subjects, first presentations, or otherwise. *Slides 1: Emojis* are least open to interpretation as the symbols clearly indicate particular emotions whilst their narrative order suggests emotional disenchantment. *Slides 2: SmartArt* displays diagrams which are rendered familiar by indicating bullet points, process, tree and cluster diagrams. Furthermore, each diagram contains a unique element to suggest an object

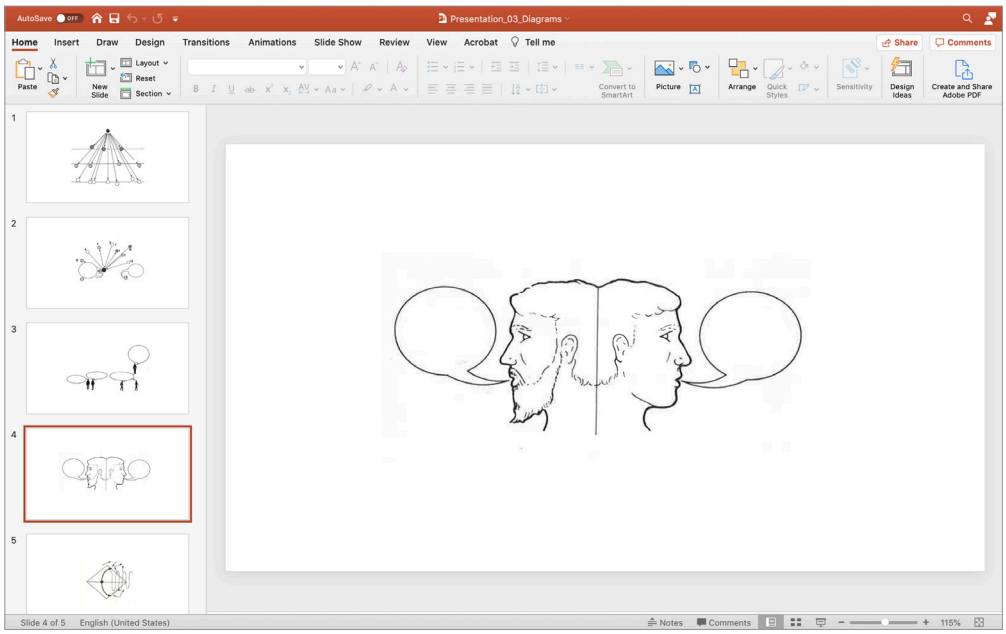
of research or intervention. *Slides 3. Diagrams* contains a variety of seemingly unrelated diagrams indicating their use in relation to the human actors involved in science and technology studies projects, particularly as the diagrams contain human figures connected by lines and dots. *Slides 4: Frankenstein* displays the narrative of Frankenstein pertaining to a metaphor for experiments gone awry and the unexpected consequences of science or technology projects. *Slides 5. Wimmelbuch* and *Slides 6. Urban* both display complex images in children's book illustrations and pixel-art made of a plethora of components interpretable in relation to spheres of domesticity and the urban realm respectively. Finally, *Slides 8. Random* and *Slides 7. Wallpapers* have no immediately apparent relationship to science and technology studies concerns. Instead, they display digitised photographic images of a journey towards outer space and random images, more personal in style, displaying an earth-bound adventure, perhaps suggesting time off or field work activities.

The design of these slides can therefore be considered a useful form of affirmative design helping researchers overcome technical difficulties. This also raises questions regarding the alternative possible methods of visualising project narratives through enactment. This is achieved through the lens of critical design, in that researchers are called to enact particular research themes using humour as a method of engagement. Through this, knowledge of researchers' practices and the implications of such is communicated. A similarity can here be drawn with Natasha Myers' (2012) report on the "Dance your PhD" contest. Initially hosted in Vienna, Austria, the event challenged researchers to represent their PhD research in a dance competition. Now an annual event attracting hundreds of entries each year, these events are considered a novel method of distraction for overworked researchers (ibid: 155). Myers also described them as body experiments in visualising or animating scientific concepts (ibid: 156) as well as an attempt to overcome stereotypes of scientists as "humourless geeks" (ibid: 158). We can therefore consider this event as a distraction for overworked scientists whilst aiding their exploration of body work. This also pertains to a critique of stereotypes of scientists and the basis for producing knowledge of their methods of visualising scientific work (ibid: 177).

How presentations become atmospheres

Before presenting again, I offered the presenters fifteen minutes of preparation time. After this, each presenter, in turn, moved to the front of the room to re-present their research interests. Furthermore, the presenters' choice of slides aligned very closely with my predictions of their use. As mentioned previously, I had not seen the presenter's original presentations prior to the workshop. In other words, I had not designed the alternative slide sets with specific presenters or presentations in mind. These predictions were based on

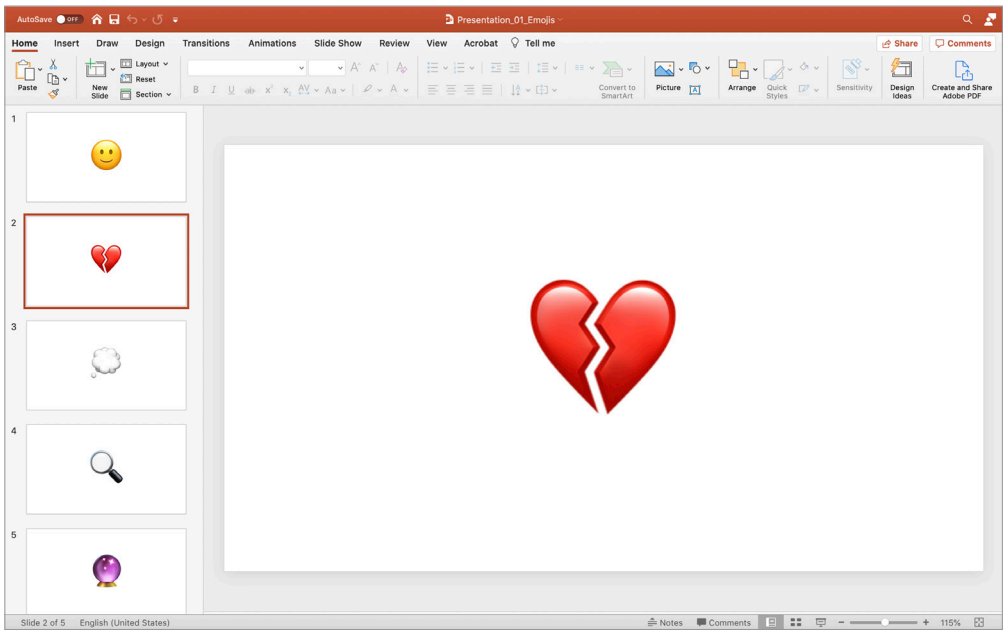
what I observed during the presenters first presentations. In this case, I thought that the presenters might choose the slides that would allow them to re-present their presentations as they had in the first part of the workshop. Dr. Innovation chose *Slides 3. Diagrams* which offered the opportunity to discuss actors associated with natural science, as in their first presentation. Dr. Dementia chose *Slides 1. Emojis* which reflected my expectation of their use to elaborate upon emotional resonance with research projects. Dr. Interdisciplinary, after much cooing over the dog wrapped in the blanket with Dr. Dementia, chose *Slides 8. Random.* Although this reflected my expectation of their use to elaborate on the personal aspects of a research adventure, it was stated in jest that the dog was the deciding factor. *Slides 4. Frankenstein* was chosen by Dr. Space-age after changing their mind from *Slides 7. Wallpapers*. This reflected my expectation that this set would be used to discuss the possible effects of science and technology projects, as in their first presentation.



4.2: Screenshot of *Slides 3. Diagrams* used by Dr. Innovation.

When using their chosen slides to present, Dr. Dementia and Dr. Space-age created an atmosphere of formality by introducing themselves using the first slide. Dr. Innovation inoculated themselves from ridicule and rendered an atmosphere of humour by making jokes about the workshop and saying "I'll just use this as illustration, I hope it works. Umm, anyway...". Each presenter also presented using the same structure as they did in their first presentations. Dr. Innovation used slide four – a diagram of two heads in profile facing in opposite directions with textless speech bubbles appearing from their mouths – to suggest that "some very, very interesting splits in the literature have emerged". The audience then

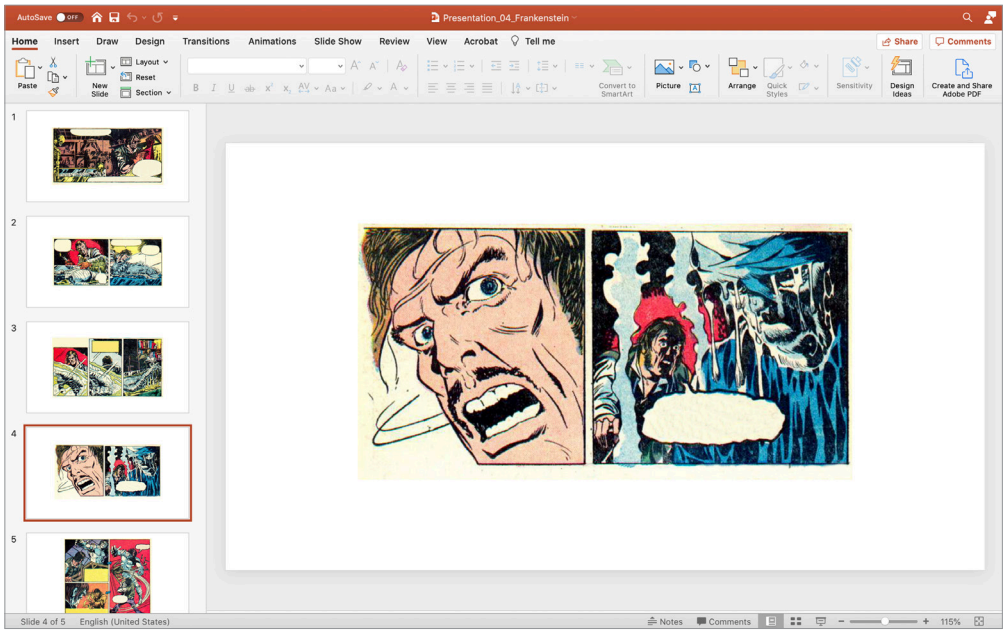
laughed and modulated an atmosphere of humour. Dr. Innovation then paused before indicating they had predicted this moment of humour by saying “Yes, they have!”. Dr. Dementia used slide two – displaying the broken heart emoji symbol – to state that “science sometimes breaks my heart” due to the practitioners’ ignorance of the risks of their work. Similarly, an atmosphere of humour was then modulated which was indicated by the audiences chuckling responses. Thereafter, Dr. Dementia further modulated an atmosphere of pity by lingering on the slide and outlining these numerous risks. Dr. Space-age also modulated an atmosphere of humour by using a comicbook frame showing Victor Frankenstein turning his head in dismay upon realising Frankenstein was alive. The audience then laughed out loud after which Dr. Space-age outlined their research associated with Silicon Valley entrepreneurs’ space programmes and their desire to escape earthy problems they may have contributed to into space, before the presentation concluded.



4.3: Screenshot of *Slides 1. Emojis* used by Dr. Dementia.

Dr. Interdisciplinary’s presentation involved humour throughout. Using slide one – an image of a person looking into the sunset – they explained how being an interdisciplinary researcher differed from how most people imagine academics “working on their own, reflecting in the sunset”. Slide two displayed an image of a dog with a blanket wrapped over its head through which they described sometimes getting too close to – “in bed with – metaphorically of course” – their research subjects, then describing their “becoming an example of the domestication of critique”. An image of a wooden cabin overlooking tree-covered hills was then used to describe their attraction to “retreating from the field, hiding

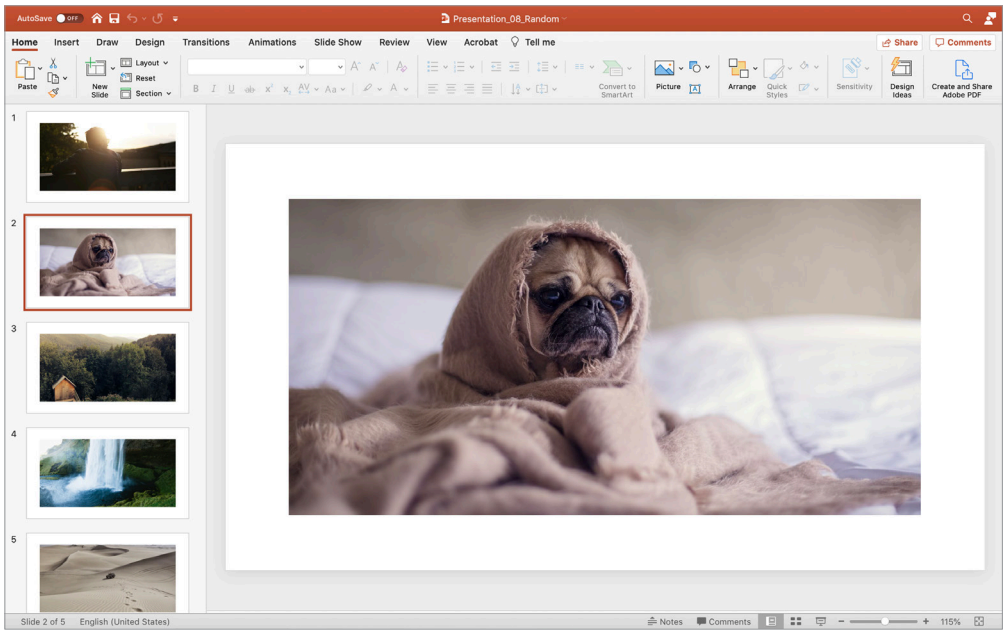
away, trying to do the solitary scholar thing – the thing we are all supposed to be doing as academics". Using an image of a waterfall, they then described their "missing the tumult" of interdisciplinary collaborations, "the excitement, the thrill, the incessant noise", it being only through such collaborations, they said, that we can "reach the sublime". An atmosphere of astonishment developed as Dr. Interdisciplinary used an image of an off-road vehicle traversing the sand dunes of a desert to form the basis for their "not being able to get out of the vehicle" of their research subject, their saying that they would go with it wherever it takes them, "even to areas where I'm agreeing to take military funding – this is also true – to end up in places where I do not belong".



4.4: Screenshot of *Slides 4. Frankenstein* used by Dr. Space-age.

All of the presenters chose designs that reflected the public image of their research which was an opportunity to modulate the atmosphere of their presentations. Dr. Innovation modulated an atmosphere of humour and inoculated themselves from ridicule by choosing the slides that reflected the style of images used by physicists Dr. Dementia's choice to present with emojis related to their appeal for pity in their first presentation. Upon the broken heart image rendering a comical atmosphere they modulated, again, an atmosphere of pity – seemingly a response to their presentation being rendered comical. Dr. Space-age chose the slides that aligned with their research agenda and which allowed them to ridicule technology entrepreneurs' fears and ambitions. In each of these presentations, the presenters were rendered objects of comedy for the audience in relation to one slide. Dr. Interdisciplinary, however, chose their slides to offer the opportunity to modulate the

atmosphere of their whole presentation and with this humorously communicate their disciplinary dedication. Through inoculating themselves from ridicule, they rendered an atmosphere of astonishment in the audience made up of people who, it seemed, could all relate to the quandaries communicated regarding academic life.



4.5: Screenshot of *Slides 8. Random* used by Dr. Interdisciplinary.

Scripts as atmospheres

Against my expectations, my breaching of the always different and fluctuating scripts of academic conference presentations led to the development of atmospheres. These atmospheres were modulated by the presenters through humour in response and to overcome the breaches. The presenters therefore chose their slides to modulate the atmosphere of their presentations and re-create the atmospheres evident in their first presentations. The presenters therefore rendered themselves the key component of, repaired and through this maintained the audience's expectations of the presentation script. The breaching of the script of the presentation did not create these atmospheres but accentuated or dramatised already-existing ones. This can be considered with more clarity by comparing the presenters' presentations given in the first part of the workshop and their use of the slides during the breaching. In this comparison, it is possible to consider exactly how the presenters emphasised subtle atmospheric qualities of the scripts of their first presentations which formed the basis for their choosing particular slides, and, through which, the presenters' expectations are made visible and accountable.

Dr. Innovation's first and second presentation used one slide as a point of humour. Dr.

Dementia used pity to appeal to the audience. Dr. Space-age, however, made jokes about technology entrepreneurs' attempts to retreat from earth-bound technological catastrophes. Dr. Interdisciplinary's presentation differed from the others as humour was used throughout. Using slide one in both presentations, they discussed how their method of interdisciplinary study differed from other modes of research. This was emphasised by slide one in the slide set I designed displaying a person looking into the sunset. Slides two, three and four in their first presentation were used to describe the different disciplines of their research – emphasised with slide two in the second presentation displaying an image of the dog and blanket. Slide six and seven in the first presentation was used to talk of what their research method enabled them to do – lead an exciting research lifestyle between disciplines and roles. Dr. Interdisciplinary also emphasised this in the second presentation by expressing ambivalence about a retreat to the supposedly expected role of an academic. After this, Dr. Interdisciplinary used the image of a waterfall to contradict their own thoughts regarding the experience of their exciting work. Slides eight and nine in the first presentation were used to talk of the potential of their method to offer the opportunity to study the same object from multiple perspectives. This was emphasised using the fifth and final slide of the set I designed. The image of an off-road vehicle was here used to communicate dedication to their research as a never-ending adventure of multiple possibilities.

When I breached the script of the presenters' presentations it encouraged them to modulate atmospheres which were used to hold together the expected presentation scripts. In doing this, I found that the presenters' choice of presentations was based on their ability to be used to modulate the atmosphere of their second presentations as in their first. Furthermore, this emphasised facets of these presenters' expectations of academic conference presentations and their ideas associated with academic life. This therefore revealed the difference between the presenters' own slides and the slides that I designed. Individuals' responses to breaches therefore allow us to understand how they design particular atmospheres through which they communicate their expectations of situations such as conference presentations. The design of scripts therefore pertains to more than the design of interactions but the design of atmospheres. As people design the scripts which modulate atmospheres, these scripts also contain these individuals' expectations. Scripts can therefore be considered *quasi-scripts* – scripts that are seemingly configurations pertaining to interactions – but much more than this including atmospheres, too.

Quasi-scripts

Michel Serres' (1982: 224-234) notion of "quasi-object" – which is initially discussed in *The Parasite,* by Latour (1993: 51-55) in *We have never been modern* and between Serres and

Latour (1995: 108, 161) published as part of their *Conversations on science, culture and time* – is important to understand the notion of quasi-script. Paramount is Serres' understanding of social relations between individuals as mutual parasitism – quasi-objects being the focal point around which such relations are constituted (Serres in Latour and Serres 1995: 161). Serres uses the idea of a ball during a ballgame. Apparently, he says, there is no social gathering without the ball which means that the game is held together by an object. Without any one or more of the 22 players of an international football team, there is only a perfectly weighted air-filled leather sphere adorned with corporate graphic design. Similarly, without the ball there are no subjects, players otherwise constitute mere people not following anything, or, something else. As Serres (1982: 226) suggests, "the ball isn't there for the body ... the body is the object of the ball". Certain forms of sociality are for Serres' held together by quasi-objects constituting what Latour (1993: 51) calls "hybrids" – the focal point of scripts in which, for instance, football players and fans, are constituted.

Just as the players, referees, lines-people, camera operators, commentators and fans apparently follow a ball, this conceptualisation also means that we must understand presenters and audiences in scientific conference presentations as following different numbers of differently designed slides. But we have seen that this script also holds particular expectations associated with now taken-for-granted presentation conduct, which, during breakdown or deviation, are repaired in numerous ways. This suggests that, although presenters are constituted as presenters when in relation with slides, they do not just follow them. This allows us to take Serres' analogy further by considering a football game similarly maintained by "repair people" – the referee, lines-people or certain forms of goal-line technology which observe the ball leaving designated pitch-geography, crossing the goal-line, or instances of perceived foul play. Similarly, this exploration of scientific conference presentations reveals a desire to repair deviations from expected norms by addressing forms of technical breakdown, thus, putting presentations back together in alignment with what neither PowerPoint slides nor ball can be proven to hold – expectations.

Ball players also attempt to modulate the atmosphere of the game through enacting trans-atmospheres – a refusal of what the ball apparently dictates, thus in repair of players' expectations. Players may shower the referee in sweat and saliva whilst making demands or fall to the floor and writhe in pain after a tickle in a tackle. Fans may then jeer and translate bottles or chairs into projectiles, or cars, once used by ethical drivers wearing seatbelts, into burning beacons of disagreement. Whilst others engage in celebrations rendering a sense of national pride – one result of the successful following of a ball around a seat-lined field – we have also seen similar responses by presenters in conference presentations. We can now imagine Latour's story of a broken projector differently. Instead of the "repairmen" putting

the projector back together again, we can imagine the modulation of atmospheres as the result of such a breakdown in the same university during a conference. In this situation, the technical services team might complain about the projector by expressing their *concern* over the lack of expected budget required for the repairs after which the board of directors, *empathising* with the issues faced, approach a network of donors who generously provide the money. Due to an ever-growing list of repair work, they instead decide to build another building in an up and coming part of a city. This short description offers an understanding of how quasi-scripts contain atmospheres which affect people and their interactions.

Scientific conference presentations are therefore quasi-scripts laden with expectations derived from relations constituted by quasi-objects. The presenter in the presentation cannot be a presenter without properly functioning presentation technology. This script cannot only be a designed arrangement pertaining to interactions but a quasi-script in which interactions are the result of affect and other human actors' expectations. As we have learnt, the arrangement of scientific conference presentations, constituted by and then eventually regulated as a certain arrangement of interactions, goes on to affect those in relation to them inevitably leading to attempts to repair other expectations through the modulation of atmospheres. The quasi-script is therefore a particular relational configuration expected by some whilst instigating affective reparative responses by others. Interactions designed by designers therefore include the affective related to expectations projected alongside PowerPoint slides displaying scientific knowledge in scientific conference presentations.

In discussion with the participants after the workshop, it was revealed that each presenter found the workshop useful. The workshop was considered *surprising* by the participants due to the humorous nature of the images I used to design the replacement slides. Dr. Space-age expressed feeling *surprised* at using the Frankenstein narrative due to having given another presentation on the same theme and not having considered this before. Dr. Dementia and Dr. Interdisciplinary added to this by engaging in a discussion about the *surprising* use of their chosen slides. Dr. Innovation considered the edited Latour diagrams *humorous,* whilst admitting to the *surprising* usefulness of presenting with them. The workshop is therefore also a quasi-script in which atmospheres are modulated. The workshop modulated atmospheres of surprise and humour for the participants that chose to participate in the presentation activity. Moreover, it is possible to consider the workshop a useful form of design in which we see participants enact their research and practice their presentations involving interactions as well as the modulation of atmospheres, too.

The *Technical Difficulties* workshop is therefore a form of design-led data collection. During the breaching, attributes of the presenters' first presentations are accentuated,

including my expectations of their choices and, unexpectedly, the modulation of the atmosphere of each presentation. In this case, it is clear that the workshop produced knowledge *already partially evident* in the first presentations which was accentuated in the second. This formed a method of comparison or clarification of already visible but not entirely new presentation phenomena. As Garfinkel (1963: 202; 1967: 47) has stated in reporting on his own breaching experiments, breaches have only two different outcomes, namely, their being taken too seriously or not at all seriously, as a joke. This workshop, however, offered the opportunity to explore more than the taking seriously or negation of a breach. By creating a situation in which one can neither take the breach seriously and repair it, nor as a joke and dismiss it, this duality was suspended and each of the presenters addressed the situation differently.

Conclusion

In this chapter, I explored academic conference presenters' use of images in a minor breaching experiment that employed humour to appeal to the participants. In the presenters' first presentations, I noticed that they all used one slide to modulate an atmosphere of humour to appeal to their audiences. They then conducted a second presentation for which I designed some slides. In these presentations, Dr. Dementia, Dr. Space-age and Dr. Innovation all used one slide, while Dr. Interdisciplinary used the whole presentation, to modulate an atmosphere of humour. The presenters modulated these atmospheres to overcome the breach that I instigated. This was most evident due to the participants modulating atmospheres of humour specifically in relation to the images. Due to this, I consider presentation scripts as quasi-scripts as they contain atmospheres which are modulated by people. As I also used humour to design the workshop, it is, on the one hand, a minor breaching experiment constituting a form of quasi-design-led data collection that is useful for those participating in it. On the other, this workshop offered me the opportunity to explore how presenters modulate the atmospheres of quasi-scripts. Due to my use of humour to design the workshop, I also modulated atmospheres of humour to appeal to my audiences. I further appealed to my audiences this way whilst hosting the workshop, specifically, when the laptop turned off mid-way through introducing it. It is therefore clear that the participants modulated atmospheres of humour to appeal to their academic audiences. We can also understand this quasi-design experiment as a quasi-script containing atmospheres that I modulated to appeal to my academic workshop participants. These participants were surprised by the usefulness of the experiment in which they revealed their use of the same humour-led practices.

Old school: Expectations in university lectures

Introduction

This chapter considers the modulation of quasi-script atmospheres as revealing academics' expectations of lectures. Giving lectures in university settings involve the use of particular technologies through which lecturers communicate their scholarly concerns *and* their expectations of their associated disciplines such as mathematics and art history to students. In these situations, lecturers modulate the atmosphere of lecture quasi-scripts in not one but various ways to align their expectations of disciplinary teaching with those of students and universities. Many studies of disciplinary teaching, however, focus on the predominant teaching methods associated with particular disciplines including writing/drawing on boards or presenting art reproductions in slide presentations to mathematics and art history students respectively. But, how can we look beyond these typical teaching methods? Is it meaningful to encourage scholars' reflexivity during teaching? And, what does this reveal of lecturers' expectations? I commence this chapter by considering the typical scripts associated with academic seminars or lectures. I identify three methods of knowledge communication – *representation, storytelling* and *demonstration* – in which various configurations of technology and people present knowledge to the "scholars of the future". I then explore lecturers' methods of presentation and two breaching workshops in which I attempted to change the technology the lecturers used during their lectures. These breaches were not conducted. They instead manifest as conversations about re-designing my otherwise disruptive breaches as "useful" *quasi-breaches* based on their expectations of each situation. Through the modulation of the atmosphere of quasi-scripts, lecturers manage expectations, not only those of students and universities but mine as a visiting researcher, too.

Quasi-scripts and expectations

In Chapter Four I discussed conference presentation *activities* whereas in this chapter I focus on academic *disciplinary* presentations. Specifically, I focus on lecturers' methods of modulating the atmospheres of quasi-scripts in appeals to students in university lectures. As outlined in the prior chapter, the design of scripts (Akrich 1992) involves the design of interactions *and* atmospheres modulated by people in quasi-scripts. In Chapter Four, I therefore build on Brown and his co-authors (2019: 21) claim that "human and non-human

phenomena" can be considered "affective" as well as Wetherell (2012: 4) and Latour's (2004: 206) suggestion that we should consider what people do *in response* to affective atmospheres. Chapter Four therefore helps us understand how quasi-scripts contribute to the study of atmospheres, in particular socio-material settings, and provides the "orientation" that these scholars suggest is useful. Quasi-scripts can therefore be understood as situations in which affective atmospheres and interactions can both be identified and understood. Breached quasi-scripts therefore pertain to the modulation of atmospheres through which people's expectations are revealed.

In this chapter, I explore how breach-interventions modulate the atmosphere of lecture quasi-scripts. By proposing some breaching experiments to two different lecturers, their attempts to re-design my proposed breaches appeared. I commence by considering three facets of teaching and the means through which this occurs – storytelling, representation and demonstration. I consider storytelling much like Kathryn Morgan (2004: 3) who discusses Plato's adaption of pre-existing or invention of new myths as the basis of philosophical work. Athenian philosophers' adoption of pre-Socratic poets' techniques here resembles the presentation of rational arguments as dialogues, *logos*, communicated through fictional scenarios, *mythos* (ibid: 4). For instance, Plato's *Symposium* depicts a series of speeches on desire and love, given during a banquet; *Republic* outlines discussions of justice and happiness with Athenians through which utopian cities are imagined; and *Theaetetus* explores knowledge in discussion between Socrates and the eponymous geometry student Theaetetus. As Morgan (2004: 2) suggests, Plato employs storytelling as philosophy's self-presentation – a tool one might use to interpret *and* know the discipline of philosophy through which otherwise abstract concepts and ideas are rendered familiar for readers.

Although philosophy may be known as a type of storytelling, I now discuss the significance of image representations in presentations by considering the visualisation of Thomas Hobbes' political philosophy. Hobbes (Hobbes and Gaskin 1651/1998) complemented his argument for sovereign rule in *Leviathan* by commissioning French printmaker Abraham Bosse to depict his ideas. One of the etchings shows a landscape of rolling hills and a walled town dominated by a giant crown-wearing figure – the torso of whom consists of miniature figures clutching a sword and a bishop's crozier. Art historian Carl Goldstein (2012: 128) suggests Bosse's "visual aids" made available Hobbes' complex political ideas to a variety of audiences. Furthermore, Horst Bredekamp (2016: 29) suggests Bosse's image fosters "awe" (ibid: 50) through which people's engagement with ideas is achieved. Representations such as these, however, form the basis for art history work – as Bredekamp's (2019) volume dedicated to interpreting Bosse's etching suggests. Image reproductions therefore contribute to our knowing what Robert Nelson (2000: 415) considers

"*is* the illustrated lecture", in this case, art history lectures involving the interpretation of images relevant to the work undertaken by art historians.

Having outlined an understanding of both storytelling and representation as relevant to philosophy and art history, I now explore demonstration as a method of teaching which is adapted through storytelling and representation. As Steven Shapin and Simon Schaffer (ibid: 23) and Greiffenhagen (2014) suggest, demonstration informs how mathematics as teaching at blackboards is known – as well as where knowledge production and presentation constitute the same activity (Shapin 1984: 481). Specifically, I draw on Shapin and Schaffer's discussions of Robert Boyle's air pump demonstrations to both produce and communicate "novel phenomena" (Gooding et al. 1989: 2) or "matters of fact" (Schaffer and Shapin 1985: 23) associated with the existence of the vacuum. Informed by logic and geometry demonstrations, the performance of "material technology" (ibid: 25) constituted the demonstration of the truth of *and* way to prove the existence of the vacuum to audiences in venues such as London's Royal Society (ibid: 57). Similarly, material technologies – blackboard and chalk – are used in mathematics to demonstrate the truth of how to prove particular theorems. In this discussion, two types of demonstration appear in which knowledge production and presentation takes place. Our understanding of each type of demonstration is therefore dependent on the socio-technical configuration and methods manifest in each situation.

Having described mathematics teaching by discussing the work of Greiffenhagen and Shapin and Schaffer, it is clear mathematical knowledge is simultaneously produced and presented in these situations. The demonstration is therefore the performance for students, on a board, of the correct way of proving a particular theorem as true. Moreover, demonstration is the demonstration of the correct method of conducting mathematics, thus revealing truths appropriate to mathematical work. Art history slide presentations are similar: a lecturer standing at the front of a room and showing students not one but a series of image representations using technologies such as slide projectors. These images are discussed and interpreted by the lecturers alone or together with the students. This pertains to the demonstration of the methods of undertaking art history in which the production of multiple truths of image or other representations takes place. Different types of demonstration involving different materials and methods inform particular expectations of disciplinary lectures including scientific, mathematics and art history demonstration.

The most important feature of demonstration I wish to highlight is how both storytelling and representation are used to modulate atmospheres, fulfilling or negating expectations of lecture quasi-scripts. I follow Garfinkel's (1963: 202; 1967: 47) understanding of individuals'

expectations as revealed during breaching experiments. This means that particular configurations of people and technology and certain types of interactions are expected in lectures. This might include interactions such as a lecturer wiping one or more blackboards signifying "the lecture hasn't begun" (Garfinkel and Sudnow: 224) or an audience "taking and holding places" in a front-facing seating arrangement (ibid: 228). Upon "seeing the room fill up", people might be seen "spacing" to offer others access to seats that are arranged in rows (ibid: 229). Classes may start with "course housekeeping details" (Eglin 2009: 53) after which the lecturer might say "um" and "okay", go on to outline the structure of what lectures might "show us" and then commence with the words, "you will remember from the last lecture that..." (Rendle-Short 1999; 2003; 2004; Garfinkel and Sudnow 2002: 232). A breach of lecture protocol may not be expected – a gunman's entrance to a lecture theatre modulating an atmosphere of horror so unbelievable it can only be considered a joke (Eglin and Hester 2003: 34). The impatience of students might be expected, including their packing their belongings noisily in their attempted closing of the lecture (Tyagunova and Greiffenhagen 2017) as another group of students assemble outside the room.

Erving Goffman (1981: 162) considers storytelling as key to fostering engagement in lecture presentations. In a lecture given by Goffman at the University of Michigan in 1976, Goffman suggests that such lectures consist of a "performing speaker" as opposed to "speaker performing" (ibid: 163). This speaker is, Goffman suggests, engaged in *memorisation, aloud reading* and *fresh talk* (ibid: 171) to "hold the floor" like an "entertainer". One might therefore expect the modulation of lecture atmospheres as observed in a 1970 experiment in the University of Southern California School of Medicine in which two speakers addressed managers and students associated with psychiatry and psychology. The "Dr. Fox Lecture" (Naftulin et al. 1973) involved the presentation of a subject irrelevant to the two groups who were each assigned to hear either a scientist or the actor Michael Fox who was playing the fictional Dr. Myron Fox of Albert Einstein College of Medicine. The audience's assessment of Dr. Fox was overwhelmingly positive and his jargon-filled presentation increased enjoyment (Williams and Ware 1976). Storytelling therefore contributes to the modulation of quasi-script atmospheres in some cases favourably altering people's perceptions of lecture quasi-scripts.

As well as verbal-gesticulatory entertainment, the use of representations including objects introduced into demonstrations might be expected in lectures. Model airplanes might enliven the presentation of mathematical knowledge at blackboards (Roehl 2012: 117); as mentioned previously, drinking bottles might be used in computer science seminars (Rendle-Short 2004: 131-139) and Johann Sebastian Bach's music might act as a pedagogical device encouraging the exploration of the materiality of music (Burns 2012: 181). More

commonly, images within or external to software such as PowerPoint are interpreted by lecturers using laser-pointing (Knoblauch 2008: 79), underlining or circling (ibid: 81-82). These interactions might support the presentation of knowledge that students might expect to encounter on printed PowerPoint slide-decks prior to the lessons (Gabriel 2008: 257) in which lecturers use bodily gestures to contextualise their spoken languages (Heath 1992: 102). Expectations of lecture procedure therefore informs certain types of disciplinary protocol as well as lecturers' and students' expectations of particular pedagogic methods.

Although I have so far described the different methods that are used during teaching, I have not described lecturers as reflexive but merely fulfilling certain expectations of lecture conduct. In the paper "Against reflexivity as an academic virtue and source of privileged knowledge" Michael Lynch (2000: 27-34) outlines six types of reflexivity – the sixth being relevant to this chapter. "Ethnomethodological reflexivity" is described as a concept that draws on Garfinkel's (1967: 1) conceptualisation of the "incarnate" character of individual's interpretation as well as "retrospectively and prospectively" producing "*account-able* states of affairs" (Lynch 2000: 33-34). This everyday reflexivity is revealed during breaching experiments in which individuals' expectations of social order are made-accountable during their repair. In this sense, individual's reflexivity is displayed in their attempts to maintain certain expectations in the event of breaches. This means that breaching experiments reveal not only individual's expectations but their reflexivity, too. This therefore raises a question as to what might be learnt of mathematics and art history lecturers' reflexivity during a breaching experiment conducted during one or more lectures.

In this research I'm particularly interested in lecturers' practice of presentation in the disciplines of mathematics and art history. I'm interested in these disciplines due to the particularities of the presentation practices associated with them which provide an image of the disciplines themselves. In other words, the practice of teaching mathematics and art history define our expectations of these disciplines. As already discussed, the discipline of mathematics is often expected to involve the use of blackboards at which mathematical demonstration occurs. Greiffenhagen (2014: 505-506) describes blackboards as informing how we know mathematics by drawing on representations of public figures such as Albert Einstein or depictions of fictional mathematicians in films. The discipline of art history is somewhat similar; Robert Nelson (2000: 415) considers how art history "*is* the illustrated lecture" (ibid: 417) with reference to the representation of art history in a well-known theatre play called "The Heidi Chronicles". In the discussion, Nelson indicates how art historians are known for "formal conversation instead of academic address" in situations where lecturers lecture "not before paintings but slides" to develop a relationship between "speaker, audience, and image" (ibid: 418). The disciplines of mathematics and art history therefore

offer an opportunity to explore lecturers' reflexivity in lectures through breaching these otherwise expected presentation practices.

The setting of mathematics and art history lectures

During late 2019 and early 2020, I observed a winter term of mathematics lectures at University College London (UCL) and spring term of art history lectures at The Courtauld Institute of Art. The mathematics lectures were given by associate professor, and specialist in geometric analysis, Dr. Measurable. Tuesday and Thursday mornings were dedicated to measure theory, specifically, the use of measurable functions in measuring spaces, for third-year undergraduate students. The art history lectures were given by senior lecturer Dr. Medieval, a specialist in Medieval art. Tuesday and Thursday afternoons were dedicated to art and travel in Medieval cities – including travel for work or religious pilgrimages. These lectures were given for second year undergraduates as well as graduate diploma and master's students. Although taking place in different locations, the lecture rooms were remarkably similar. Each had a tiered seating arrangement facing a lecture podium. To the right of each stood a digital lectern complete with computer, monitor, microphone, digital projector and screen. Prior to the mathematics lecture, a student would put the presentation projection screen up, revealing two whiteboards, indicating their expectation of use of the board in mathematics. In the art history lectures, the projector displayed the desktop of a Windows PC for which the microphone was activated. This amplified the opening and closing lecture-theatre doors therefore communicating expectations of a presentation given using the microphone.

In addition to observations, I intended to conduct two breaching experiments with Dr. Measurable and Dr. Medieval. Instead, I only discussed them, due to Dr. Measurable's resisting the breaches that I proposed whilst some other breaches breached my research with Dr. Medieval. These experiments were initially discussed prior to commencing my observations. In these discussions, I professed an interest in working with the lecturers to change the lecture. Initially, I took as the starting point that teaching mathematics and art history involves demonstrating the correct way of proving theorems on boards and discussing interpretations of image representations on slides respectively. Although these methods are the most prevalent in mathematics and art history teaching, I considered this as representative of overlooking other types of creativity involved in, and the different possible methods that could be used in, teaching. Based on my observations which I outline later in this chapter, I suggested that Dr. Measurable could employ an intervention encouraging the use of storytelling in the mathematics lecture. Specifically, I suggested drawing on the rich history of narrative fiction in philosophy by using Plato's *Symposium* instead of the

whiteboards. Similarly, I discussed with Dr. Medieval the possibility of drawing on mathematics teaching methods to explore an intervention in the art history teaching scenario. I initiated the conversation by suggesting the integration of a mobile board into the lecture to replace the PowerPoint presentation software.

Expectations in lecture quasi-scripts

The atmosphere of the mathematics and art history lectures were dramatically different. The beginning of the mathematics lecture was indicated by Dr. Measurable appearing through the lecture theatre double doors, proceeding to the podium in silence, wiping equations left from the previous class and writing symbols, or, the "proposition" at the top of the board. In response, the student prior modulation of atmospheres of sociability was replaced by quiet studiousness after which Dr. Measurable would turn briefly to explain, before continuing writing and using the board marker to point to sections of the board. Such proof-demonstration continued throughout whereby Dr. Measurable filled each of the two boards multiple times, and, when both were full, erased one as to leave the other visible. For the most-part, students took notes thus copying and, in some cases, taking pictures using digital tablets or smartphone cameras. As each part concluded, Dr. Measurable asked "Questions?" or "Any questions?". The rhetorical nature of these questions was made apparent by Dr. Measurable's failing to pause and offer the opportunity for students to answer. Instead, they immediately moved to answer the posed question using writing whilst talking. This was corroborated in a follow-up discussion as related to students' expectations of not having to speak-out in lectures.

The beginning of the art history lectures involved a diverse array of presentation techniques involving the modulation of different atmospheres to engage students and increase interaction. Quite the opposite to the mathematics lecture, Dr. Medieval entered the room and engaged in discussion with the students. Through this, they contributed to the already-modulated atmospheres of sociality. This indicated that their expectations were associated with a different "style" of lecturer-student relationship pertaining to student interaction as well as atmospheric change. Beyond the dimming of the lights indicating the start of the lecture, on one occasion, the PowerPoint software loaded onto the digital lectern computer was incompatible with the prepared presentation slides. In this instance, Dr. Medieval informed the students humorously with "oh, no..." before "running upstairs" to get the laptop on which the slides had been prepared. This moment indicated that atmospheres of humour are used to placate student expectations, in this case, when they expected the lecture to commence whereas, instead, they were faced with a technical difficulty.

During these lectures, "title slides" showed the lecture title centre-aligned in capitalised sans-serif font over an image, and, "subtitle slides" contained text in white on a black background. Others displayed reproductions of paintings, manuscript illuminations, maps, or photographic images of sculptures, badges, altarpieces or stained-glass windows below which was the appropriately formatted citation. Alongside asking questions or for interpretation of image representations, Dr. Medieval modulated supportive atmospheres by saying "That's a good question" or "That's a difficult question to answer" or "I've not thought of that before". Dr. Medieval also modulated reflexive atmospheres of humour particularly regarding their own verbal articulation by saying "I'm sorry, I'm existing purely in urban language today", or, "Sorry I've gone into urban speak again" when suggesting that churches needed to "big up" their saints in paintings, or, when discussing the formation of artist guilds to distinguish artists from "wannabes". Another example of this type of reflexivity was evident through Dr. Medieval's use of handouts. Dr. Medieval handed out sheets of paper in defiance of the university sustainability policy, saying it was important to have something to "scribble on", although the handouts were printed double-sided so the lecturer was "not cutting down yet more trees". Both lectures therefore involve the use of expected teaching methods to modulate atmospheres to *fulfil* student expectations. This involved personable or less-personable atmospheres pertaining to lecturer-student relationships as well as particular types of verbal articulation and attention to what was deemed to be a world-wide climate crisis.

Having discussed how atmospheres are modulated to fulfil student expectations of mathematics and art history lectures, I now discuss how the lecturers *negated* students' expectations through their use of the methods least associated with their respective disciplines. I'm interested in this as the lecturers momentarily used these least-expected methods not to undermine but emphasise and, through this, play on students' expectations to create moments of surprise. For instance, Dr. Medieval presented in three ways – while standing and talking at the lectern, they talked about particular representations on screen, or talked about representations on screen with supporting gestures, and thirdly, the least expected, they moved from the lectern to engage with on-screen representations using writing and drawing gestures. The first instance of Dr. Medieval's use of mathematical teaching methods became apparent during the use of an image of a medieval vulva-badge – a vulva with legs, seemingly mid-journey, wearing a hat and shoes whilst holding a walking stick. The badge was humorously discussed by Dr. Medieval as representative of women and religious pilgrims travelling to "escape constraint" in the Middle Ages. Whilst explaining this, Dr. Medieval used either one hand

or finger to draw around the badge whereby drawing was used to focus the now-giggling students' attention and modulate an atmosphere of humour in the lecture.

Another example involved the use of photographic images of the cell-like spaces attached to churches in which anchorites or anchorets lived during life-long religious withdrawal from society. This involved Dr. Medieval informing the audience of "going over there" towards the screen. Facing the screen, Dr. Medieval drew over three photographs and then returned to the lectern after which they paced-out the plan drawing of the associated two-metre space on the lecture theatre floor. This was met with students' laughter and whispering, and an atmosphere of disbelief appeared. Much less obviously, Dr. Medieval engaged in writing-drawing to focus student attention to *de-modulate* previously modulated atmospheres. In the second lecture Dr. Medieval acknowledged "Oh, I'll go over here to show you" while crossing to a triptych of manuscript illuminations which were then traced to indicate "those who travelled" during the Middle Ages, including artists. Later, Dr. Medieval discussed another image showing a series of small huts in an urban scene. This was then traced to show the artists before moving to the next slide containing the traced section enlarged. A third such interaction occurred during Dr. Medieval's use of a map of Paris to show where parchment makers worked in the city. In the fourth lecture, Dr. Medieval discussed "liminal" spaces through using a plan drawing of a cathedral. Dr. Medieval then invited one student to volunteer, approach the screen and trace these liminal spaces. This de-modulated the lecture atmospheres to that of focused studiousness as evidenced in the mathematics lectures.

Much as mathematics writing-drawing appears in art history teaching, moments of storytelling subtly appear in Dr. Measurable's mathematics lectures. Observing the mathematics lectures allows me to extend prior descriptions of writing and drawing in mathematics – including Dr. Measurable's use of sentences as the continuation of equations, or, if parts were considered incorrect, the writing of a capitalised "NO". Dr. Measurable used braces to show two possible outcomes while underlining, boxes, circles or arrows highlighted what were deemed important sections. In lecture two, three and four, Dr. Measurable drew wave, line and two different bar graphs. Another of Dr. Measurable's graphs constituted a road network made up of five black dashed vertical lines crossed with red lines, and, in lecture five, a moated Aztec or Mayan pyramid covered by a steep natural landscape – two rolling hills with a dashed line cutting across and projecting upwards at particular points. In all cases, unlike words, sentences, lines, circles or boxes, Dr. Measurable used graphs which were always added outside the equation, using not only the most frequently chosen blue but also red and green markers. Dr. Measurable's office, in which follow up discussions were conducted, also had two

boards. On one, there was what appeared to be half an avocado with the seed visible inside, and, next to this, there was what appeared to be a bowler hat. The seed inside of what appeared to be an avocado apparently constituted the starting point for an investigation into the relationship between these objects thereafter explored in equations.

In another light, these different techniques allow Dr. Measurable's teaching to be considered subtle term-long storytelling, namely, the story related to proving theorem performed for students. Each lecture built on the previous one as Dr. Measurable demonstrated the different equations developed by other mathematical researchers in order. Throughout, Dr. Measurable consistently "personified" the symbols of these equations as if they were characters in a story. In referring to personification, I draw on Stewart Guthrie's (1995: 125) outlining non-humans as "described in terms of human characteristics" (ibid: 130). As mentioned previously, personification is used in philosophical storytelling to make abstract concepts familiar. Similarly, Dr. Measurable narrativised the symbols as "these guys" in "groups" as "families" of functions existing in "unions" somewhat "compatible" with others which are "nested". This, in turn, personified "X" which "belongs to K over here" or, "VK with the sum of the characteristics of these guys G and H". I asked Dr. Measurable about this during a follow-up discussion in which he suggested that this type of language renders abstractions familiar and that this is common in mathematics. Both lectures therefore involve the use of unexpected methods to modulate atmospheres to *fulfil* as well as *negate* student expectations. This process was used to manage the modulation of entertaining or studious atmospheres which thereafter spurred different types of engagement and maintained the expected lecturer-student relationships.

Breaching expectations in lectures

To further reveal the lecturer's expectations of teaching, I designed two breaching experiments for the mathematics and art history lectures with the intention of holding them although, in the end, they were only discussed. The breaches that I designed involved replacing the expected mathematics boards and art history PowerPoint software with a philosophy book and mobile board respectively. Upon mentioning the breaches in my meetings with Dr. Measurable and Dr. Medieval, I noticed each express slight trepidation at my being a designer who "likes to change things". Nevertheless, I reassured them that any intervention would be discussed as well as involve their feedback. After this, the opportunity to engage in discussing my breaching experiments was suggested. During this time, unexpected responses to the discussed breaches

offered me the opportunity to learn how lecturers' expectations are the result of reflexive negotiations with students and the university. Although expressing interest, Dr. Measurable was keen to mention in an e-mail reading a copy of Plato's *Symposium* – "with pleasure (slowly)". I chose to use Plato's publications due to Dr. Measurable having expressed interest in the use of guided storytelling as method of education as discussed in Plato's (2008: 71) *Republic*. Dr. Measurable, however, quickly moved the discussion in a different direction by explaining that "showing them how to do it" was enforced by time constraints, emphasised due to a University College Union (UCU) strike a few weeks away. As a result, I agreed with Dr. Measurable that I would choose a section of the publication, develop an intervention and then send it in an e-mail for consideration.

A day or so later, I sent Dr. Measurable the suggested breach intervention as a set of adaptable instructions akin to a film-script, showing how it might be integrated in the lecture. I left certain sections blank whilst indicating the beginning and end of the intervention with a change from the use of a blue marker to a red one – just as Dr. Measurable did when drawing graphs during the lectures. In this suggestion, I focused on one section of the *Symposium* dialogue which I discussed with Dr. Measurable as holding potential to be modified to support the lecture when convenient. In the section, I draw on how love is discussed by the book's six protagonists – Agathon, Phaedrus, Pausanias, Eryximachus, Aristophanes and Socrates – whose speeches are summarised by Diotima as revealing love for: a physical body or bodies; souls; laws and institutions; knowledge; and love for love itself. During the dialogue, orator and general Alcibiades, inebriated, appears with some ribbons on his head (ibid: 56-57). Loudly, he knocks on the door and conducts a eulogy concerning his desire for Socrates, who resists the advances. Socrates' actions, apparently, represent dedication to the pursuit of truth and teaching (ibid: 66). I therefore used this part of the dialogue to translate a humorous situation and to expand Dr. Measurable's writing "NO" on the boards next to incorrect equations. I anticipated that this story would be used by Dr. Measurable to demonstrate the "wrong way" before returning to demonstrate the correct equation formulation – and in which a Platonic message regarding the avoidance of distraction by "worldly pleasures" is evident.

EXAMPLE PROPOSAL INTERVENTION 1: PLATO'S "SYMPOSIUM"

Until this point, THE LECTURER demonstrates the subject of the class on whiteboards using a **BLUE** whiteboard marker to outline the correct proofs. At one moment, the usual flow of the lecture is interrupted to demonstrate how something *does not* work - why it must be achieved in one way. THE LECTURER starts by picking up a **RED** whiteboard marker and turning to the class…

[START OF INTERVENTION]

THE LECTURER

Now, imagine you are in the café downstairs reading over your lecture notes. As you look up, you notice someone approaching you. "Hey…" they say, "…have I seen you here before?" But you are confused, you are not sure if you have or not…

THE LECTURER makes a confused expression - looking around as if searching for an answer, as if they are sat in the café...

THE LECTURER

They continue - "what are you doing tonight? There's a great party and I'm going. Do you want to come?". As you sit there, you do think this person is very beautiful, and, you have not been to a party in a very long time. Mathematics is often time consuming and complex, after all.

THE LECTURER looks deep in thought, holding his chin with his hand, before raising one hand with pointed finger.

THE LECTURER

But, realising you have some homework and exams to revise for, you politely decline. Unfortunately, your new friend looks a little sad. You resist the temptation!

THE LECTURER makes a sad expression.

THE LECTURER

You know that the quest for mathematical truth is important. This union would interrupt access to such knowledge - the pursuit of beauty, truth, we here try to prove.

If we take this **[into this equation]**, we can see how, when we bring these together like two lovers not meant to be, they do not work. The

5.1: Page one of the first text sent in an e-mail to Dr. Measurable.

truth we seek is disrupted. We can only achieve this in one way, as otherwise, the results change.

THE LECTURER proceeds to draw the incorrect version of the relevant equation on the whiteboard in the **RED** marker.

THE LECTURER

You see, these two cannot be because it is problematic. It doesn't lead to our discovery of the truth of **[explanation of the problem]**. Now, can you tell me why this is wrong?

Upon taking suggestions from the students, THE LECTURER wipes the **RED** incorrect formulation away, and, draws the correct version in the **BLUE** marker - under the direction of the student. This process of student feedback can continue until correct if not the first time.

The lecture continues as previously planned.

[END OF INTERVENTION]

5.2: Page two of the first text sent in an e-mail to Dr. Measurable.

Similarly, I initiated a discussion with Dr. Medieval and suggested integrating a mobile board in the lecture to replace the PowerPoint presentation situation. I communicated this in the first discussion prior to my observations and later in a follow-up discussion with a sketch I had drawn. The sketch showed the type of mobile board I wished to use – a drawing placed on a white background. I chose to present a contextless drawing such as this so as to not refer to any particular situation of use. My aim was to allow the proposed technologies to be imagined separately from the contexts they may more typically be associated with, or those I wanted to see them used in. In the meeting, I produced the drawing for Dr. Medieval and discussed the drawing techniques that I had observed in their lectures. In both cases, I approached the situation by suggesting that each lecturer could integrate the different media as convenient to the subject of the already-planned teaching sessions. I expected that Dr. Measurable might consider an appropriate lecture in which this addition might be added to foreground the resolve of theorem-based problems. To enable this, I left parts of the instruction blank to indicate its unfinished status. Similarly, my interaction with Dr. Medieval was that of an in-person discussion in which my A4-printed drawings specifying no particular context allowed for their contribution, too. Instead of the interventions being accepted, however, something interesting happened and through which the lecturer's methods of managing different expectations in their lectures was made apparent.

5.3: Sketch of a mobile board as discussed with Dr. Medieval.

To build on the prior discussion, I now focus on the effects of my attempted intervention in the mathematics lecture. During the discussions, Dr. Measurable presented their expectations of their mathematical lectures. These expectations were thereafter managed in

relation to the potential atmospheres the breaches might modulate. For instance, Dr. Measurable, after reading my adaptation of Plato's *Symposium*, informed me of their concerns regarding the "unlikely" event that one of the students might have recently suffered a romantic rejection. This, Dr. Measurable suggested, might cause embarrassment. My suggested breach therefore made apparent Dr. Measurable's attempt to maintain atmospheres of studiousness as opposed to personability. This allowed Dr. Measurable to overcome the breach which may have impacted his relationship with the university. Dr. Measurable and I then discussed how the narrative might better relate to two objects in a less personal manner. In response, Dr. Measurable agreed to consider another intervention that I designed based on this feedback. As if a designer engaged in the designer-client relationship, I focused on Plato's *Republic* to explore how mathematics might help avoid a different catastrophe. I translated *The Republic* as an already realised utopia of philosopher kings which framed a key point in a theorem to demonstrate how mathematics might help resolve real-world problems.

In this case, Dr. Measurable further resisted my suggested breach as they considered the application of mathematical formula to fictional real-world scenarios as patronising or condescending. This, Dr. Measurable explained to me, did not take into account the now third-year students' mathematical abilities. "Enlivening" mathematics was thereafter discussed as more suitable for first year or "introductory" mathematics courses. Dr. Measurable, however, once again offered me the opportunity to develop another intervention based on this feedback. I made sure to attempt to avoid patronising the students and translated Plato's (2014) *Theaetetus* in which Dr. Measurable was to take the role of Socrates in discussion with a geometry student. In the text, Socrates claims to be inspired by his midwife mother thus helping students "give birth" to knowledge – a method evident in discussions of desire and justice in *The Symposium* and *The Republic* respectively. I therefore produced another intervention offering the students the opportunity to develop their own narratives related to the application or implications of the use of mathematics outside the classroom.

EXAMPLE PROPOSAL INTERVENTION 2: PLATO'S "REPUBLIC".

Until this point, THE LECTURER demonstrates the subject of the class on whiteboards using a **BLUE** whiteboard marker to outline the correct proofs. At one moment, the usual flow of the lecture is interrupted to demonstrate how something *does not* work – why it must be achieved in one way. THE LECTURER starts by wiping one of the white boards clean, leaving the equation on the other. Picking up a **RED** whiteboard marker and turning to the class…

[START OF INTERRUPTION]

THE LECTURER

Now we are going to explore the implications of the equation we here discuss. So, imagine we have built the optimum city-society here on earth. All the designers, engineers and scientists have produced a formula for harmonious living – a utopia. As it turns out, however, there is a threat to now-peaceful earth not from divisive radical-populist political groups, but, from outer-space.

THE LECTURER makes a shocked expression – looking around as if worried about a threat, as if on this now-threatened earth.

THE LECTURER

The threat, however, is not from an alien civilisation, but an asteroid on a collision-course with earth. The mathematicians working with the other scientists therefore need to be very careful with their calculations. There are lots of variables!

THE LECTURER looks deep in thought, holding his chin with his hand, before raising one hand with pointed finger.

THE LECTURER

By conducting the equation in the wrong way, the mathematicians might calculate the asteroid as hitting earth – mistakenly causing unnecessary panic sparking civil unrest. To avoid this, they work to understand the relationship between the asteroid and earth. Will it hit earth, or not?

THE LECTURER proceeds to draw, with the **RED** pen, a globe-sphere representing earth in the centre of the now-clean whiteboard, with a city rising from the surface. Then, THE LECTURER draws an asteroid with a trail of debris

5.4: Page one of the second text sent in an e-mail to Dr. Measurable.

approaching one side of the globe with a dotted arrow showing its potentially catastrophic trajectory.

THE LECTURER

Now, if we use our equation in this way, we can see that we get result **[X]**. This means that the scientists have calculated that the asteroid will hit earth due to **[insert rationale here]**.

THE LECTURER proceeds to draw, with the **RED** pen, the incorrect equation. THE LECTURER also adds an arrow to the drawing showing that, in this case, the asteroid will hit earth.

THE LECTURER

As we can see, by doing the equation this way, the mathematicians would think the asteroid will hit earth. Panic ensues quickly followed by civil unrest! Now, can you tell me why this is incorrect?

Upon taking suggestions from the students, THE LECTURER wipes the **RED** incorrect formulation away, and, draws the correct version in the **BLUE** marker – under the direction of the students. This process of student feedback can continue until correct if not the first time – until THE LECTURER can add a **BLUE** arrow suggesting the asteroid will miss earth.

THE LECTURER

Now, by taking into account the possible variables, and, correcting this, we can see that, in fact, the comet is not going to hit earth. A near miss! A shooting-star! What a relief!

THE LECTURER now erases the drawing of the earth and the asteroid. The lecture continues as previously planned.

[END OF INTERRUPTION]

5.5: Page two of the second text sent in an e-mail to Dr. Measurable.

EXAMPLE PROPOSAL INTERVENTION 3: PLATO'S "THEAETETUS"

Until this point, THE LECTURER demonstrates the subject of the class on whiteboards using a **BLUE** whiteboard marker to outline the correct proofs. At one moment, the usual flow of the lecture is interrupted to demonstrate how something *does not* work – why it must be achieved in one way. THE LECTURER, picking up a **RED** whiteboard marker and turning to the class…

[START OF INTERRUPTION]

THE LECTURER

Now we are going to explore the implications of the equation we here discuss. If we use our equation in this way, we can see that we get result **[X]**. This means that we calculate **[insert rationale here]**.

THE LECTURER proceeds to draw, with the **RED** pen, the incorrect equation on the white board.

THE LECTURER

Now, can you tell me why this is incorrect?

Upon encouraging and taking suggestions from the students, THE LECTURER wipes the **RED** incorrect formulation away, and, draws the correct version in the **BLUE** marker – under the direction of the students. This process of student feedback can continue until correct if not the first time.

THE LECTURER

Now, by taking into account the possible variables, and, correcting this, we can see that, in fact, we get another result. Can anyone tell me how and where this type of equation might be applied? Why is this important? Can we think of any situations in which something might go wrong as a result of a miscalculation?

The lecturer then takes suggestions from, discusses with and encourages the students to produce narratives and debate the application and implication of mathematics in 'the real world'. This process of student feedback can continue until the discussion resolves.

[END OF INTERRUPTION]

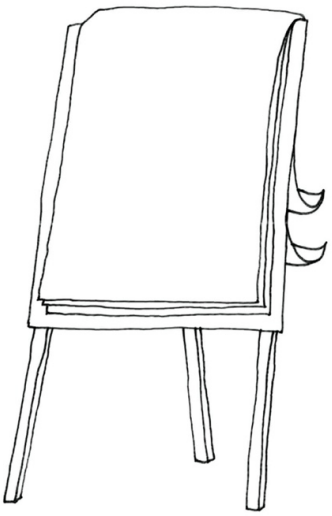
5.6: The third text sent in an e-mail to Dr. Measurable.

This intervention was contested due to the necessity of demonstrating the "wrong way" entirely. Although I had observed Dr. Measurable's writing "NO" and various other error warnings on the whiteboards, the approach I suggested was apparently not necessary for third year students as the "wrong" parts of equations "should be instinctive". Furthermore, Dr. Measurable contested my understanding of mathematics as applied in the "real world". There were, Dr. Measurable said, differences between the "real" world of a "pure" and "applied" mathematician – with Dr. Measurable revealing their alignment with the former. This indicates bifurcation in world of mathematicians – one of which informs the student's disciplinary expectations. For the pure mathematician, mathematical knowledge is discovered through debate. For the "applied" mathematician – reflecting students' expectations, whom, it was suggested, would often go on to study probability or statistics – knowledge is considered discovered and thereafter applicable in exams or employment positions. Dr. Measurable therefore worked to maintain the student's expectations associated with witnessing the presentation of mathematical truth at boards. Dr. Measurable achieved this through modulating the atmospheres of lectures to embody less-personable atmospheres of quiet studiousness. Through this, the students' expectations of receiving applicable mathematical knowledge, as opposed to debating the truth of such knowledge, were fulfilled.

Unlike Dr. Measurable, Dr. Medieval resisted all but one of my suggested breach interventions. During this time, the same management of expectations was evident. Dr. Medieval informed the students of a series of upcoming University College Union strikes in the lecture prior to their meeting with me. During the initial stages of the meeting, I discussed observing Dr. Medieval's frequent calls for student participation in numerous ways. Agreeing, Dr. Medieval discussed the particular area of interest they taught – the Middle Ages – as well as the difficulties associated with engaging students with this subject due to the expansive thousand-year time period, and, competing interests such as more contemporary art. Dr. Medieval also revealed an interest in studying art in this period due to the "material orphans" associated with this period "bridging the gap" between the past and the present. Dr. Medieval therefore considered these artefacts important as they held traces of the ideas and values of another time – the study of which they considered putting pressure on contemporary ways of knowing the world.

The discussion then turned to Dr. Medieval's drawing in the lectures. After considering my idea of replacing the PowerPoint with a mobile whiteboard, Dr. Medieval emphasised that entirely replacing the technology would not be possible. The drawing methods I observed, Dr. Medieval said, were only supplementary to the images on the slides – before

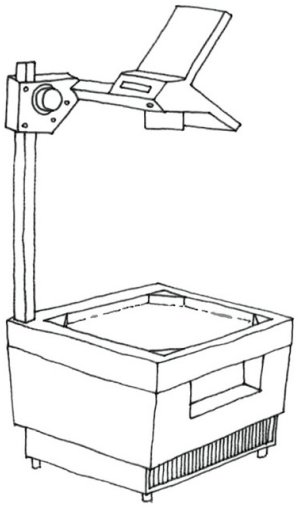
explaining that merely drawing would not mediate the type of art history teaching that students expect. I then introduced a drawing of a business-style flipchart into the conversation. After considering this object for a moment, Dr. Medieval then mentioned there was such a chart somewhere in the building but considered this and the mobile board as more suitable for smaller seminars. Moreover, Dr. Medieval questioned the visibility of anything written on a small chart or board in the rather large lecture theatre, particularly when the theatre lights were dimmed. Nevertheless, Dr. Medieval expressed enthusiasm for the possibilities of the mobile board to elicit student participation in the lecture. Dr. Medieval therefore seemed keen to explore how students might draw on the same surface as, or with, the lecturer alongside PowerPoint, thus emphasising student participation and a more personable teaching style.



5.7: Sketch of a business-style flipchart as discussed with Dr. Medieval.

Dr. Medieval then, perhaps in response to my ill-informed intervention ideas, discussed their prior explorations of the use of drawing in lectures to increase student engagement. In many instances, I witnessed students being asked to consider texts as well as various images as the basis for activities encouraging interpretation. However, Dr. Medieval discussed other versions including giving students text handouts to translate as drawings. Dr. Medieval also discussed another example which involved students in the two halves of the lecture theatre being asked to draw an image from a text or translate an image into text respectively. Moreover, I was informed that the meeting Dr. Medieval had allocated after the one shared with me involved interviewing potential master's students. Printouts of a series of illuminated manuscripts were then produced. These were, Dr. Medieval explained, the basis for a drawing

activity in which the master's course applicants are asked to annotate the images and communicate their reading of them.



5.8: Sketch of an overhead projector as discussed with Dr. Medieval.

At this point, I revealed a sketch of an overhead projector. I introduced the sketch whilst explaining my uncertainty as to whether these devices still remain in universities. Dr. Medieval echoed my comments of being able to remember the use of these devices long ago. Dr. Medieval then discussed the device as holding the potential not only to mediate their drawing over the PowerPoint presentation slides using the plastic film and marker pens, but that students might participate. Dr. Medieval then mentioned further benefits including how the plastic films used for drawing might become "traces" of the lecture activities. Dr. Medieval therefore considered the overhead projector better for inspiring student participation than the laser pen or other similar functions in PowerPoint. Dr. Medieval's willingness to introduce an overhead projector into the lecture therefore involved their reflection on its functionality and how the device aligned with their research. This intervention therefore represented a form of "discovery" and of bringing to light the historical artefacts that were previously referred to as "material orphans". Drs. Measurable and Medieval therefore manage the expectations of students and universities through modulating different "old school" atmospheres through the use of particular presentation technologies that inform particular types of student-lecturer interactions, too.

Expectations in mathematics and art history lectures

It is perhaps expected that I now analyse and then conclude this chapter by outlining my intervention in Dr. Medieval's lecture with an "old school" presentation technology. However, this overlooks crucial observations made in this chapter, namely, how the lecturers considered the potential consequences of my suggested breaches and engaged in their re-design. Dr. Medieval engaged in negotiation to render the suggested breach useful for them and Dr. Measurable engaged in a similar negotiation which resulted in a thought experiment. I understand these negotiations as not only negotiations of the details of the breaches but as representative of what Goffman (1956: 4, 121) refers to as a "working consensus" developed to guarantee "safe social interaction" in which in participants clarify expectations based on mutually agreed identities (1961: 9, 26). Dr. Medieval and Dr. Measurable ensure their status as "lecturers" during this time and, more specifically, "good lecturers" due to their carefully ensuring that students' expectations are met.

This involves the lecturers yielding (Michael 1996: 53) to particular quasi-scripts. For instance, if Dr. Measurable used Plato's *Symposium* to teach mathematics, an atmosphere of discomfort may have been modulated and, as Dr. Measurable predicted, upset one or some of the students. Dr. Measurable might therefore have transitioned from "good lecturer" to "insensitive lecturer" therefore undermining the students' and university's expectations. Similarly, if Dr. Medieval used a mobile board to teach art history, this would involve spending lots of time drawing the images. This would leave little time to elicit student interaction and similarly undermine these expectations. Dr. Medieval might therefore transition from "engaging lecturer" to "disengaged lecturer". The translation of the breach from major to minor is therefore a crucial part of this experiment and how the lecturers maintained these expectations. Dr. Measurable immediately claimed that there was not enough time to consider how Plato's *Symposium* might replace the mathematical teaching methods by highlighting the already defined curriculum and the University College Union strikes. Similarly, Dr. Medieval informed me that eradicating the slides would negate the student's expectations and similarly commenced re-designing the interventions, as designers do with clients. Both therefore negotiated the transformation of the breach, through which we learn of lecturer's reflexivity.

With Dr. Measurable, it was clear teaching mathematics involves attempts to manage and through this engender less personable atmospheres than those in art history. This was, in part, a response to the students' expectations of lecturer-student relations, and, the university's expectations of the mathematical pedagogical format. In these situations, I witnessed a calm presentation style in which students rarely interrupted. This was emphasised by Dr. Measurable's asking questions to which they would swiftly supply the

answer. Students, therefore, followed Dr. Measurable's writing-drawing symbols and equations at the boards in which subtle storytelling associated with philosophy appeared. My discussions with Dr. Measurable therefore revealed their reflexivity including their explaining and through this attempting to modulate atmospheres of understanding when discussing their concerns. This was emphasised when Dr. Measurable explained that telling Alcibiades' unfortunate love story might lead to student complaints. Storytelling and personification therefore reflect the reflexive management of expectations to enable the presentation of abstract knowledge in relation to student and university expectations.

Similarly, Dr. Medieval maintained expectations and encouraged students' engagement with representations of artefacts from the Middle Ages. Dr. Medieval's humour was mediated by image-representations including a badge depicting a walking vulva and the anchorites' cell. Dr. Medieval also became the subject of meta-jokes, particularly when referencing their own accidental use of "urban speak". Dr. Medieval, however, modulated the atmosphere of the lecture through the least expected method of teaching – drawing. As revealed in the discussions, this helped Dr. Medieval direct the lecture-discussions as well as move away from the lectern. This drew Dr. Medieval, the visual material and the students together in a more personable discussion. It is therefore clear that each lecturer reflexively used a variety of means to modulate the atmosphere of the lecture to maintain university expectations and manage those of students. Dr. Medieval delivered their lectures in a particular timeframe but did so whilst encouraging the students' interest. Dr. Medieval used humour as well as encouraged students to engage in "live" art history work. This was punctuated momentarily by mathematics teaching methods which re-focused the students' attention. Dr. Measurable, however, demonstrated their reflexivity in relation to university and student expectations. In this case, Dr. Measurable modulated more studious atmospheres which took into account the students' level of ability and personal situation. Lectures are therefore the result of negotiations between university and student expectations. Moreover, the lecturer's reflexivity played a further role in their achieving their teaching in relation to further negotiations with me. This resulted in the transformation of my suggested breaches into *quasi-breaches* and through which they fulfilled my expectations as a visiting researcher, too. But what are quasi-breaches, and, how do they relate to quasi-scripts and breaching experiments?

Reflexivity in lectures

To define a quasi-breach, it must first be considered that the design of scripts involves atmospheres which are subject to modulation by people. Similarly, breaching experiments involve the modulation of quasi-script atmospheres as observed in this discussion. This first appeared in the lecturers' own use of unexpected methods. This appears again when I

suggested a breach which then modulated the atmosphere of the discussions with the lecturers. This then spurred each lecturer to imagine the consequences of these imaginary *future breaching experiments* and which informed their responses to my suggestions. This means that breaches are one way in which the modulation of quasi-script atmospheres occurs – as observed in lecturers' own use of unexpected methods in their respective disciplines. Breaches are therefore useful to interrupt and produce knowledge of lecturers' methods of repairing expectations. They are also useful to produce knowledge of how lecturers achieve this during the re-design of a quasi-breach. Dr. Measurable clearly used particular methods to maintain students' expectations during the lectures. Dr. Medieval also made efforts to encourage students to engage in live art history work. This was all made apparent when I informed the lecturers of my desire to conduct a breaching experiment. This was then discussed and either resisted as too disruptive or re-designed as acceptable. In the case of Dr. Medieval, the breach I suggested was clearly translated to support interaction in and communicate the values of art history during the teaching lecture.

By considering breaches in this way, I build on the design of the breaching presentation workshop I described in Chapter Four. This type of workshop is, however, different as the lecturer's mostly resisted participating in my breaching experiments. On the one hand, this type of breach further overcomes breaches being considered an unethical or anxiety-inducing (Mehan and Wood 1975: 113; Gregory 1982: 50) method of data collection (Crabtree 2004; 2004b; 2004c) as no anxiety is induced due to those involved being made aware of my desire to conduct a breaching experiment. This was in each case followed by a discussion related to the participants' concerns associated with each of the breaches. Although this type of breaching experiment involved the design of a type of breaching design-workshop (Poole 2012; Nilsson et al. 2019) that was not conducted, the lecturers did communicate valuable knowledge as to why this was not possible. For Dr. Measurable, this involved describing the modulation of atmospheres otherwise causing upset, and for Dr. Medieval, the removal of slides undermining students' expectations associated with discussing art-image reproductions. One technology was therefore chosen as a minor breach to compliment the art history lecture. This breach was negotiated as being not only less disruptive but also useful. Such a quasi-breach is an intervention used to entice student interaction in a way that reflects the lecturer's interest in exploring historic artefacts in and during art history teaching.

This negotiation revealed how lecturers maintain expected lecture protocol in discussion and through which we learn of their methods. Hence, the modulation of quasi-script atmospheres involves lecturers reflexively considering expectations associated with quasi-scripts as mutually "useful". Quasi-breaches are breaches that are transformed by

the people that are potentially subject to them. These people transform them due to the modulation of the atmospheres of the discussions in which the breaches were raised. In this case, the lecturers' methods of maintaining lecture protocol was made visible in which my breaches were not entirely resisted but negotiated based on the lecturer's purposes. In negotiations it was communicated that to conduct lectures, lecturers communicate disciplinary expertise in ways that are relevant to the expectations of universities, students, and in this case, myself as researcher. Quasi-breaching experiments are therefore useful to understand how lecturers reflexively modulate the atmospheres of lecture quasi-scripts in maintenance or negation of expectations between students and universities. They are also useful as a form of design based on their potential usefulness in the situations in which they are raised to compliment.

Although I chose to write this chapter with a focus on my negotiations with the lecturers, I nevertheless planned to conduct the intervention using the overhead projector after the University College Union strikes had concluded. Due to the outbreak of Coronavirus (COVID-19), however, the remaining lectures were "breached": they were pre-recorded and presented through a Virtual Learning Environment (VLE). This leads me to conclude that quasi-breaches are therefore quite different from the minor and major breaches discussed in Chapter One. Minor breaches were discussed as accepted by those encountering them, in some cases, as Garfinkel (1963: 202) points out, through the use of humour. Major breaches are breaches that the participants encounter and resist (ibid: 1967: 47). The logic of quasi-breaches is therefore very different. Quasi-breaches do not involve the participants suddenly encountering a breach that they either accept or resist as in typical breaching experiments. Nor do they merely accept or resist breaches that they are made aware of as with minor and major breaching experiments. Quasi-breaching breaching experiments involve informing possible participants that a breach might occur at a future time, given their agreement. This offers researchers the opportunity to propose different types of breaches for research participants' consideration. Furthermore, the participants of these breaches are offered the opportunity to respond to them during which time they reject the proposed breaches and open the opportunity for the researcher to propose new ones. The participants may therefore offer feedback on the breaches which not only provides valuable information but offers the opportunity to re-design the breach with the participants. The fact that breaches are common in everyday life is here used to develop another type of breaching experiment that may address some of the critiques of breaching experiments previously offered by social scientists.

The irony of breaching experiments

In this thesis I first explored breaching experiments in the introduction as major and minor breaches. Typical breaches are those Garfinkel (1963: 202, 206; 1967: 47) explored to which people respond with anger or humour. Minor and major breaches are breaches to which no such response is exhibited as both are expected. This is reported on in Chapter Four in a conference presentation workshop with science and technology studies scholars. I designed and described the experiment as aiding scholars' use of images and through which their modulation of atmospheres was made visible. In this chapter, I instigate major breaches by informing my research participants of my desire to conduct them. This elicited the negotiations in which the participants went about translating my suggested major into a minor breach, and due to engaging in this process, a quasi-breach. This occurs due to the participants imagining the potential modulation of quasi-script atmospheres. The atmosphere of the discussion was then modulated in response by describing the potential effects of these otherwise imaginary future breaching experiments which are then bought to bear on the original breach suggestion.

On reflection, it might seem I am constructing an ironic account of lecturers' teaching methods through offering them a series of disruptive interventions. The reason I bring an ironic reading to attention is, first, due to the widely accepted claim that breaching experiments are problematic. Second, I note that Garfinkel's work has been discussed as ironic – including by Garfinkel himself – and he has cautioned against using irony to render ethnomethodological work useless (1967: viii, 9). An example of an ironic reading is found in Alan Blum and Peter McHugh's (1984: 82) exploration of self-reflection in the arts and sciences. In the discussion, McHugh suggests Garfinkel's work is an example of programmatic irony. Later, they consider Garfinkel's (1967: 116-185) dealings with transgender woman Agnes Torres as ironic, again, without stating how or why (Blum and McHugh 1984: 99). Due to this, I consider it apt to further outline how I consider my dealings with the lecturers, in relation to my exploration of other versions of the apparently controversial breaching experiment.

It might therefore appear that I engage in what James Watson (1998: 202) refers to as methodological or programmatic irony. In other words, some might think that this experiment involved offering the scholars some breach interventions that I already knew would be refused. However, during the discussions I mentioned my interest in observing and intervening in the lectures as a designer. These conversations became discussions about the participants' teaching methods in which they informed me of the details of either what I had observed or broadly what to expect in their lectures. I responded to these discussions by suggesting that any intervention would be informed by my observations and designed to

enliven the teaching. I therefore informed each participant of my research interests and how different objects or teaching styles might complement one another. In other words, I had no idea what an acceptable or unacceptable breach would be for the lecturers. To assume that the breaches would have been rejected would have been presumptive – a decision I could only have made in relation to projections based on experiences of academia or other academics. I therefore worked to design each and approach the interventions as a design challenge subject to negotiation, much like a designer-client relationship.

By furthering this discussion, it might be suggested I am concerned with ironicising the "unconscious" methods used by lecturers which is akin to Watson's (1998: 206) commentary on symbolic interactionist portrayals of people operating under false consciousness. However, this chapter has been compiled based on what I observed in any given moment. In discussions with Dr. Measurable, I reported on the modulation of atmospheres to maintain a professional distance from students. This was further maintained in discussions regarding my breaches in which such concerns were displayed. Dr. Medieval considered engaging with the students to inspire interest as important and this was also clarified in the discussions. This research therefore engages with the methods used by individuals in particular settings through observing what occurred. From this perspective, a breach is nothing more than terminology used to describe a practice which is evident in everyday situations and through which perceptions and interactions are managed. In other words, it is not only social researchers "making trouble" through which practices in everyday situations are made visible (Garfinkel 1967: 37-38). Breaches, depending on severity, are also no trouble. They are merely a method of maintaining one's idea of social order through modulating quasi-script atmospheres.

During this research, Dr. Measurable and Dr. Medieval's expectations of their lectures were maintained. I also attempted to maintain this research which included holding some breaching experiments which were useful for the completion of it. If I was not a doctoral researcher, however, it is questionable whether these interactions would be considered breaches. For example, if I made these requests as a workplace design consultant employed by the mathematics or art history departments to explore the diversification of teaching methods, the breaches would be seen as "suggested changes". The conversations with the lecturers might have still taken place and revealed their expectations in the same way. Furthermore, this process might still have been interrupted by the COVID-19 pandemic which is more unexpected, anxiety-inducing, and which required changes beyond that of the breaches I suggested. Due to this, academics in universities have radically altered their lecture practices to enable them to take place through internet learning environments. It is therefore clear that breaches vary in scale and intensity and are not merely problematic. By

moving beyond this perception, we can understand them as a simultaneous form of design and social research. It is perhaps therefore time to alter our expectations of breaching experiments as merely unexpected and distressing as there is one more way to conduct breaching beyond minor and major breaches. I now move to outline the idea of *quasi-breaching experiments* in more detail.

Quasi-breaches

The quasi-breaching approach aligns with my research participants as I do not ironicise but make "strange" and describable the often-unnoticed complexities of academic work. I claim, as Garfinkel (1967: viii, 9) did, that this type of work should not be considered ironic as doing so merely renders it useless. Beyond this is the possibility of considering breaching as anyway undertaken in a variety of ways – regardless of people's different sensitivities – and to manage the atmosphere of quasi-scripts. Through considering Garfinkel's (Lynch 2012: 166) apparent distrust of the publishing world, I consider Garfinkel not merely conducting breaches to observe and describe the results of them in texts but to make visible the breaching anyway occurring in everyday life. If we take into account that the modulation of quasi-script atmospheres is the result of different types of breach, Garfinkel's examples evoke atmosphere-modulating anger (1967: 47) or humorous responses (1963: 202, 206). Depending on the individual involved, these responses may be experienced as distressing, too, thus informing different interactions with and perceptions of quasi-scripts.

For example, Michael Lynch (2012: 163-164) reports on a variety of "Garfinkel stories" in a memorial paper of the same name. In one case, Lynch outlines Garfinkel's conducting what he calls an "inadvertent breach" whilst later expressing uncertainty as to whether this was purposeful. In either case, during an academic presentation Lynch, concerned that he had agitated his mentor, describes Garfinkel whispering and making motions towards a colleague's shirt pocket. Garfinkel, it turns out, wrongly suspected the person was secretly recording the presentation. In this case, breaches of varying severity nevertheless reveal facets of people's expectations in everyday scenarios. This inevitably includes Garfinkel's or Lynch's expectations as it does others who write about breaching as humorous (Gamson 1974: 218), immoral and anxiety-inducing (Mehan and Wood 1975: 113; Gregory 1982: 50), good for design-led data collection (Crabtree 2004; 2004b; 2004c; Poole 2012; Nilsson et al. 2019) or for inventing new forms of sociality (Marres 2012: 79; Guggenheim et al. 2018: 69). It is therefore clear that those concerned with breaching experiments either consider them very seriously and thereafter re-design new ways to conduct or understand them as, perhaps, I am here. Or, they dismiss them as not at all serious, and as a joke.

By taking breaches seriously, their nuanced nature is clarified. In this chapter, it is clear

that merely attempting to breach the atmosphere of teaching presentations revealed how lecturers reflexively managed their students' and university's expectations. This was most visible in discussion with Dr. Measurable who resisted my suggested breach interventions through imagining a potential future situation. In this situation, Dr. Measurable imagined that the student and university expectations would become unmanageable and potentially lead to complaints. Discussions with Dr. Medieval revealed similar student and university expectations whilst negotiating with me to accept a variation on a proposed breach-intervention. The intervention was considered acceptable as it worked by aligning Dr. Medieval's expectations of in-class-interaction with the students' and university's expectations of lecture-format and subject matter. Pertinently, what disrupted this breach was not the misalignment of expectations, but another breach. Through considering COVID-19 a breach, we can therefore consider that breaches not only occur in "experiments" but beyond this, including to the "experimenter", in everyday life in and beyond the academy, too.

This allows for a more nuanced understanding of the relationship between atmospheres, quasi-scripts and breaching experiments. In this chapter, we see the modulation of atmospheres as informing interaction in quasi-scripts. This was made visible by suggesting a series of breaches which revealed lecturers' methods of managing expectations. To achieve this, the lecturers imagined the consequences of an imaginary future breaching experiment and then suggested their re-design in which they took the position of "client". This occurred due to my modulating the atmosphere of the discussion by suggesting a breach. The lecturers, therefore, managed *my* expectations of conducting some research but in relation to student and university expectations. Due to this, my suggested breaches were rendered "useful" quasi-breaches which themselves constitute a method of exploring responses to breaching in a less anxiety-inducing way – where we can also see how lecturers change as opposed to repair the order of presentations. This, however, was subject to another breach. Due to this, it is clear that the modulation of quasi-script atmospheres is the result of breaches through which knowledge of people's methods of repairing the pre-existing social order *and* managing changes in it is revealed. Before ironically dismissing breaching experiments as merely disruptive or a joke, we should first be careful to not modulate the atmosphere of quasi-scripts – unless the relevance and consequences of different types of breaches have been explored first.

Conclusion

In this chapter, I explored the design of what I expected to be a minor breaching experiment but what I thereafter referred to as a quasi-breaching experiment. Initially, I designed each of these experiments related to how I thought the lectures might be enlivened. This experiment differed from the one undertaken in Chapter Four as I offered the lecturers the details of the breach interventions and, through this, the opportunity of refusal. As a result, each of my attempts to breach the lectures were resisted. Before this, however, I negotiated these breaches with the lecturers and, during these moments, learned of student and university expectations of disciplinary teaching. Dr. Measurable's refusal to undertake any of the breaching experiments was based on their considering the breaches as negating typical expectations of mathematics teaching. Dr. Medieval, however, agreed to undertake one of the negotiated versions of the experiments due to the technology representing their art-historical values. Whilst planning to undertake this experiment, the second breach of my expectations appeared – the appearance of the COVID-19 pandemic. This resulted in a bigger change to university teaching in that all teaching was transferred to virtual learning environments. In one-way, quasi-breaches are useful for revealing lecturers' reflexivity and methods of maintaining particular expectations during lectures. In another, the expectations of the researchers conducting these experiments are revealed. Quasi-breaches are therefore a way of describing a reflexively constructed method used by people to manage other people's experience and interactions in quasi-scripts. Although I now understand quasi-design as involving the design of minor, major and quasi-breaching experiments, this chapter reveals that breaches are an inevitable and unavoidable part of everyday life, too.

Changing rooms: Personae in mock research interviews

Introduction

In this chapter I explore how the modulation of quasi-script atmospheres reveals academics' expectations of mock research interviews which offers a way of understanding academics' scholarly personae. Mock research interviews are techniques of simulation used in universities to prepare academics for "real" funding interviews. In these research interviews, academics compete for research funding awarded by various funding bodies external to universities. Mock interviews are therefore rehearsals that involve researchers' academic peers who perform as funding-body panel members to help them present their research and themselves to acquire research funding. As competition for funding increases, academics face increasing pressure to stand out whilst fitting into particular academic communities. Researchers must therefore present with innovative projects in a manner safe enough to be trusted with large sums of research money. Arguably, this is achieved through the design of academics' personae. Through this, researchers' research interests are communicated as part of their self-presentation. By exploring this, I'm interested in how the presentation of personae is achieved in mock interviews not only through interaction but through researchers' use of non-humans to modulate the atmosphere. I consider these non-humans as contributing to the design of quasi-scripts through which particular atmospheres are modulated therefore affecting the perception of researchers in mock interviews. The basis of this chapter involves literature associated with personae and the notion of quasi-script to form the basis for some observations and a breach-intervention in a mock interview. However, a series of other breaches resulted not in an intervention but reflection on the presentation of my own personae as *quasi-designer* undertaking this research. Through this, I demonstrate that quasi-scripts contain atmospheres, expectations and personae which affect perceptions of researchers including myself.

Quasi-scripts and personae

This chapter builds on Chapters Four and Five by discussing how breaching quasi-scripts not only reveals atmospheres and people's expectations but facets of their personalities. I do this through considering some observations of mock interviews and an attempted intervention in

one of them all of which I undertook in a London-based university. Specifically, I explore lecturers' methods of modulating quasi-scripts to ensure being perceived and treated as per their expectations during appeals to panels of research funders at the headquarters of research funding bodies. As outlined in Chapter Four, the design of scripts (Akrich 1992) involves not only the design of interactions, but atmospheres modulated by people as quasi-scripts. In this chapter I designed a minor breaching workshop through which the notion quasi-script was developed. This therefore builds on Brown and his co-authors (2019: 21) claim and adds to this a way of talking of the "human and non-human phenomena" that can be considered "affective" as well as exploring how quasi-scripts hold capacity to observe what Wetherell (2012: 4) and Latour (2004: 206) deem important – how people respond to atmospheres. In the last chapter, I designed a quasi-breaching experiment which revealed lecturers' responses to breaches in discussion with me. This revealed their reflexivity and expectations of the breaches I proposed and the lectures I anticipated them being a part of. I therefore propose that breaching experiments are the "central object" of affect and atmosphere which, when applied to quasi-scripts, affect and through this reveal people's expectations. In this chapter I take this forward to explore how mock research interview quasi-scripts can be breached to reveal atmospheres and expectations as well as facets of academics' professions and personalities as personae.

Mock interviews are situations in which researchers and their peers with experience of research interviews come together in a situation representative of an upcoming research interview. Research interviews are important for academics' careers, as indicated by the existence of mock research interviews for which academic peers take time away from their other work commitments to aid their colleagues' preparations. This includes, if required, each researcher presenting a short PowerPoint presentation of their research interests and, in all cases, answering questions posed by a panel of academic peer reviewers. Michèle Lamont's book *How Professors Think* (2009) is important for considering how research excellence is defined through peer-review evaluation. Drawing on examples in the United States, Lamont describes academics' obligation to pass judgement on the work of other academics as affecting the development of academic disciplines, the rank of competing universities and the allocation of resources. This, in turn, affects academics' access to high-status publication opportunities as well as their job security. Lamont describes panels of interdisciplinary academics as rendering research projects accountable from a variety of disciplinary perspectives. Furthermore, these panels are described as considering candidates constituting a compromise position favourably, with more controversial or "difficult" projects excluded in the synthesis formed by those present (ibid: 6-7).

The mock research interview is therefore an example of preparation for academic

assessment – a situation of the assessment of a future situation of research funding assessment. Having previously outlined the details of research subjects in written proposals – including financial plans, timelines and considerations of ethical conduct – applicants are interviewed by particular research funding agencies. Those successful in applying are invited to attend a research interview at, for instance, the Brussels-based European Research Council (ERC) or at the Wellcome Trust's London headquarters. Based on the success of the assessment of the written submissions, and prior to the interview, a recent development in British universities trying to improve the chances of candidate's success is their hosting mock interviews with the help of peers and research support officers. The configuration of such situations echoes US-based peer review described by Lamont but with the objective of aiding accountability in external research interviews as opposed to peer-review situations conducted for internal university purposes.

Mock interviews include a panel of academics who have prior research interview success. Due to this, the panel includes academics from disciplines not directly related to the research candidate. An upshot of this is that mock interview quasi-scripts foster "antagonistic atmospheres" in which different disciplinary perspectives are bought to bear on research projects (Barry and Born 2013: 12). These antagonistic atmospheres are modulated by the panel's recollecting prior experiences of research interviews, and through this manifesting a representation of how they imagine the future research interview. During this time, the panel modulate antagonistic atmospheres due to conflicting disciplinary ideas and their collective experiences in "real" research interviews. Research candidates are therefore offered the opportunity to rehearse, make accountable and assess their interview performance. In these situations, research candidates gather around meeting or seminar-room tables with panels of their academic peers, in some cases present their research to them, and in all cases answer the questions that are posed by them. Research interviews therefore take place in socio-material arrangements of people and non-humans suggesting epistemic practices are socio-material practices informed by atmospheres modulated by people based on individual or collective expectations associated with particular quasi-scripts.

During my observations of mock interviews, I became interested in how mock interviews not only help researchers to communicate knowledge in PowerPoint or answer questions posed by other academics but also how the mock interview is a platform in which academic researchers' self-presentation is made accountable and refined. Specifically, I'm interested in how feedback given in these situations contributes to researchers' ability to successfully represent their "home" universities when meeting other academics and being interviewed at the headquarters of research funding bodies – funding bodies such academics will go on to

represent if successful as recipients of funding. Moreover, I'm interested in how feedback given by the panel often relates to the various non-human components constituting the design of mock interviews. This feedback therefore contributes to the development of academic personae which is informed by expectations as a result of the modulation of particular atmospheres as part of peer review situations.

I now further explore the role of non-humans in academic interviews. Through this, I offer an understanding as to how the design of interviews modulates atmospheres revealing individuals' identities. In an account of a qualitative research interview undertaken as part of a study of the effects of ionising radiation in Sellafield, in the north of England, Mike Michael (2004) describes a "disastrous interview episode" undertaken with a participant who, after a period of unemployment, wanted to discuss their new job at Burger King (ibid: 13). The same interview was also described as interrupted by a playful cat, which "gradually removed the tape recorder from the scene" whilst a pit-bulldog, and prior media reports about such dogs, roused Michael's fear of "devil dogs" (ibid: 14). Academic interviews, in this case in the social sciences, are therefore situations in which sound recorders, academics and research subjects constitute what we know of as a qualitative academic interview. Atmospheres are also modulated by non-human entities, through which we learn about the academics. In this case, we hear of an academic subject to atmospheres of fear perpetuated by media reports informing the modulation of such atmospheres in relation to dogs. We can therefore understand Michael's identity as "influenced by media reports" and "fearful of devil dogs". We can also understand Michael's (1996: 53) identity as appearing in yielding not only to networks of socio-technical relations, but atmospheres modulated by non-humans in and as part of quasi-scripts.

Non-humans also contribute to the modulation of atmospheres affecting how academics are perceived during research interviews. Non-humans can be understood as what Goffman (1956: 13) refers to as "expressive equipment" through which individuals "intentionally or unwittingly" contribute to their self-presentation. In an exploration of safely undertaking qualitative interviews with men as a woman, Deborah Lee (1997: 558-559) reports carrying a personal alarm in the case of unavoidable advances on the part of male interviewees. Unfortunately for Lee, the alarm accidently turned on during an interview, modulating an atmosphere of alarm. Lee describes running from the interview and "the length of a corridor and unlocking a door" before she could "throw the contents of my bag on the floor to find and stop the alarm". Lee's alarm therefore modulated an atmosphere of alarm and through which we might consider Lee, although rejected later in the paper (ibid: 563), as alarmist. In both this and Michael's example, people are subject to

atmospheres modulated by non-humans and through which their identities are communicated as fearful or alarmist.

Further in Lee's (ibid: 558-559) paper about the alarm, she notes "changing her appearance" by dressing "primly in trousers and a T-shirt buttoned up to the neck" with "no jewelry or makeup" to indicate that she had "made no effort" to appear attractive to her research subjects. This reflects other accounts such as: Carol Warren's (with Rasmussen 1977: 362) report on wearing a ring with a large stone on her "wedding finger" to avoid problems with "interested" males in a courtroom; Lorna McKee and Margaret O'Brien's stating that they (1983: 158) avoided wearing makeup when interviewing single fathers about their sexual behaviors; Joan Gurney's (1985: 55) wearing "masculine" dress in a prosecutor's office to avoid harassment and; Sara Willott's (1998: 179) report on her failure to conceal she was a women whilst interviewing men in low security prisons. Similarly during anthropology fieldwork, Mary Ellen Conaway (1986: 59; 60) describes wearing "odd-looking, loose-fitting clothing, no make-up and, flat-soled shoes" to prevent romantic advances in South America and Maureen Giovannini (1986: 110) describes "dressing conservatively and carrying a large notebook whenever I left the house" in Sicily. In these examples, non-humans are described as holding potential to modulate atmospheres in which individuals' identities are obscured or communicated. This aids academics in being treated in ways they expect in situations of academic work. If non-humans mediate academic work in qualitative interviews and fieldwork, clothing must also do so in mock interviews, too.

Given that clothing modulates the atmosphere of quasi-scripts and indicates a conception of people's identity, clothing therefore constitutes a key component used to project one's academic personae. This is hinted at in Rachel Hurdley's (2015) description of changing from "office pants" for use in the university to "pretty pants" suitable for social occasions. Mock interviews can therefore be considered situations in which personae are modified in a similar way for public presentation beyond universities. Marcel Mauss (1938/2008: 18) defines personae in relation to individuals' expectations whilst being required to fulfil expectations associated with culturally defined roles. In a special issue of *Science in Context*, Lorraine Daston and Heinz Otto Sibum (2003: 7) consider "scientific personae" in hagiographic representations mediating scientists' perceived individuality and the requirements of particular organisations. To become an "inorganic chemist", they suggest, is to become a professional practicing inorganic chemistry, whereas embodiment requires cultural recognition (ibid: 5). Pertinent, therefore, is William Clark's (2007: 17; 18) discussion of clothing such as hoods and robes as contributing to displays of scholarly rank in 17th-century Cambridge University. Although reflecting bureaucratic hierarchies in German

as "orders of clothing" – *eine kleiderordnung* (ibid: 34-36) – this type of ceremonial clothing conceals whereas clothing used in workplace settings reveals individual's expectations of their identity.

For example, Conal Condren (2006: 68) suggests philosophers' robes indicate a specific disciplinary identity alongside what one might consider personal preferences associated with a particular way of life. In addition to the beards worn by Socrates, Plato or Epicurus, or Diogenes' use of a barrel as shelter, these outfits apparently "advertise" certain ways of life (Hadot 1995: 30, 103) – much like Elizabeth Wilson's (1985/2003: 242-243) observation of boiler suits and dungarees as apparently aiding the expression of feminist intellectuals' values. Moreover, Caroline McGranahan (2013) notes six types of dress at American Anthropological Association (AAA) conferences including "wearing one's field site", men distinguishing themselves from each other using jackets whilst women use shoes. Similarly, on the European Research Council's celebratory "Ten Years Ten Portraits" website, a mathematics researcher, previously awarded European Research Council research funding, presents with a "three-piece suit, pocket-watch, cravat, cufflinks, and always a spider on the lapel". Academic researchers therefore communicate in relation to disciplinary expectations and due to this communicate their own preferences which are identified through clothing appropriate to the context in which they work. Through this, their academic "way of life" is portrayed as a version of what I hereon refer to as *academic personae*. This means that academics also constitute a component of advertising for universities and funding bodies by being displayed on their websites.

As discussed in Chapter Four, the humorous use of presentation images helps academics modulate the atmospheres of quasi-scripts to allow for the continuity of otherwise disrupted presentations. In Chapter Five, I described particular technologies informing the modulation of atmospheres revealing students' and lecturers' expectations of lectures. In this chapter, I extend this discussion by exploring the modulation of atmospheres to offer academics the opportunity to refine their scholarly personae during mock interviews. An opportunity therefore appears for aiding researchers' self-presentation through breaching mock interview quasi-scripts and introducing non-humans such as trousers, shirts, iPads, pieces of paper or combinations of them as new clothing outfits. This offers the opportunity to analyse researchers' methods of modulating atmospheres in accomplishing academic work as expected by academic organisations whilst requesting they be perceived and treated in particular ways. I now explore some observations of mock interviews and a mock interview workshop I designed to accompany this called *Changing Rooms*. In this discussion, I consider how participants modulate quasi-script atmospheres through the use of non-humans and the extent to which this communicates their academic personae. I also

reflect on the workshop in relation to my lack of presenting my own academic personae as quasi-designer, too.

The setting of mock interviews

Between September 2017 and December 2019, I observed six mock interviews undertaken in preparation for four different funding interviews. After these mock interviews, I discussed the mock interview experience with the presenting researchers. Each mock interview was held in a room in one of three buildings located on a London university campus. The first three mock interviews, in which sociologist Dr. Hip presented twice and sociologist Dr. Carey once, were held in a seminar room on the top floor of a high-rise building. The fourth, held for cultural studies researcher Dr. Tech, took place in a modern building with colourful cladding and furniture. Dr. Tech's second took place in a seminar room in a terraced building as did psychologist Dr. Bop's mock interview. Dr. Hip and Dr. Carey presented in a room with walls of white wallpaper displaying a framed but faded departmental conference poster and a patio door leading to a roof terrace with disorganised metal furniture. In the modern building, Dr. Tech presented in a larger seminar room in which the walls, carpets and furniture were all different shades of grey – a similar decorative style to Dr. Tech and Dr. Bop's smaller seminar room in the terraced building.

Each seminar room was configured to emphasise an atmosphere of formality. As one might expect, each room was set up for a PowerPoint presentation. Dr. Hip and Dr. Carey's semi-neglected blue-carpeted box and Dr. Tech's larger monochrome coloured room both contained pull-down projection screens, ceiling projectors and a "trolley" and lectern from which presentations were given respectively. Dr. Tech and Dr. Bop's smaller seminar room, however, contained a smaller television screen-topped lectern due to the smaller size of the room. The most notable feature of each was the arrangement of furniture, in particular, how tables were used to separate the mock interviewees from the panel. In Dr. Hip and Dr. Carey's room, a large wooden oval meeting table was placed between them and the panel during their interviews. Although Dr. Carey sat at the table during the interview due to feeling ill and a presentation not being required, the panel nevertheless sat on one side whilst Dr. Carey remained on the other. Similarly, in Dr. Tech's first, the panel sat at a row of tables separating them from the interviewee as one might expect on a television talent show. Due to the smaller size of the room in the terraced building, Dr. Tech's second and Dr. Bop's interviews contained a square arc of tables with another row of tables in front of this. This row sat between and divided the interviewees and the panel. This use of tables indicates how non-humans are used to modulate atmospheres in mock interviews, in this case, by modulating atmospheres of formality akin to those at "real" funding interviews.

Mock interview quasi-scripts

The most prevalent occurrence in each mock interview was the modulation of particular atmospheres to align the experience with that imagined by the panel as representative of "real" research interviews. Each mock interview was structured in the same way as these research interviews but with variations in the time given and the necessity of PowerPoint presentations, according to the stipulations of the research interviewing body. Dr. Hip's mock interview involved presenting using PowerPoint software to answer questions regarding the design of a particular type of clothing – the second due to not receiving funding initially. Dr. Carey's was held without presentation software in preparation for what would become a successful application regarding how particular communities come to require "care". Dr. Tech's involved a PowerPoint presentation concerning the use of technology by, as one of the panel summarised: "people who ... play a lot of loud music ... with ... technology". Finally, Dr. Bop gave a PowerPoint during his mock interview concerning dance performances.

Prior to each interview, five mock-panel members, as well as one to five research support officers from the university research support department, gathered at an agreed time in the agreed location and talked through the upcoming process. This was facilitated by a "lead" panel member who endeavoured to maintain an atmosphere of formality. In the cases of Dr. Hip and Dr. Carey, the lead requested each interviewee leave the room to facilitate the panel's preparations over fifteen minutes. However, Dr. Tech and Dr. Bop were not asked to leave the seminar rooms due to the panel's familiarity with the proceedings. The atmosphere of mock interview quasi-scripts is therefore one of formality, particularly in Dr. Tech's subjection to an audience from the research support department. This atmosphere was compounded when the interviewees re-entered the room after the preparation, or if still in the room, standing up to indicate the beginning of the mock interview. Their standing up represented the start of a fifteen-minute time period in which their research interests and selves would be subject to questioning by colleagues taking the role of "real" research interview panel judges.

As outlined during the preparation stage of each mock interview, Dr. Hip conducted an eight-minute PowerPoint presentation followed by fifteen minutes of questions from a panel taking the role of research interview panel judges. Standing at the front of the room, Dr. Hip displayed a series of slides decorated with a serif-font and pictorial sketches and, in the first, whilst wearing clothing as part of the research project. Dr. Tech commenced the first five-minute presentation using slides displaying photographic images related to the research community they studied and, on the penultimate slide, a short segment of a peice of music. However, during Dr. Tech's second mock interview this was moved to the first slide, much like a radio-show or advertisement jingle acting as an "opener". Dr. Bop's presentation, however,

was built not of five but one slide containing a series of brightly coloured columns on a white background which, notably, had very small text, images and university logos. In Dr. Carey's, no presentation was required. Instead, fifteen minutes of questions were asked and answered. Mock interviews are not merely held together by seemingly similar socio-technical arrangements, but atmospheres constituted as formal by humans and non-humans.

After Dr. Hip, Dr. Tech and Dr. Bop's presentations, the panel each posed technical, methodological and theoretical questions in a way emphasising formality. In Dr. Carey's, questions formed the basis of the whole mock interview and were asked by the panel based on a written research proposal. As the panels are formed of academics with prior experience of research interviews, they often harboured similar disciplinary concerns as the presenting researcher but with competing perspectives. Moreover, in each mock interview that I observed, there was often a "surprise" academic from another discipline which acted to further modulate "antagonistic atmospheres" (Barry and Born 2013: 12). In these cases, academics imagined a future research interview involving the modulation of an antagonistic atmosphere – an imaginary future quasi-script involving questions asked in a direct, even antagonistic manner. This suggests atmospheres are accomplished by academics who perform versions of their academic personae as imagined representations of a future interview panel. Mock interviews can therefore be understood as involving the modulation of atmospheres of formality through the arrangement of potentially antagonistic academics from different disciplines in a room in which non-humans emphasise atmospheres deemed representative of "real" research interviews.

Humans and non-humans in mock interviews

Now that the general mock interview quasi-script is outlined as an atmosphere of antagonistic formality modulated by the panel and other non-humans, I now consider the further modulation of atmospheres in mock interviews by humans and non-humans in more detail. Although key to holding mock interviews, the modulation of atmospheres was initially apparent during my often arriving to observe mock interviews prior to their occurring. During the preparatory stage of Dr. Hip's second, the lead and another panel member were struggling with some cables connecting the laptop to the projector. Whilst waiting for the laptop to turn on, and as a blue error screen prevailed, they shared a joke about a technical difficulty. Humour was also apparent in Dr. Tech's first mock interview. As many of the research support staff filtered into the room, a joke was shared with me, having initially been mistaken for a member of the judging panel. Upon realising I was observing as part of my doctoral research, I was jokingly offered a meeting after the completion of this research in relation to my applying for further funding for which I might undertake a mock

interview myself.

As the academics and support staff entered the rooms, handshakes indicated that they recognised an overarching formality. These offered handshakes represented a type of demonstration that the mock interview was indeed a professional situation. The use of facial expressions such as smiles, raised eyebrows and the exchange of small talk to accompany handshakes, however, suggested that although formal, the mock interview was made up of people familiar with each other. This was emphasised in Dr. Carey's mock interview which many attended whilst harbouring illnesses acquired during the holiday. Handshakes were therefore acknowledged but avoided due to concerns regarding the transmission of illness. Thereafter, a formal atmosphere prevailed indicated by the lead panel member informing each person of the preparation period commencing. During the preparations, the panel discussed, in a tone devoid of small talk or jokes, the questions they would ask, and, in Dr. Hip's first, their collective agreement of doing so with "no niceties". Panel members therefore directly mentioned their intention to modulate atmospheres of formality, indicated in accordance with time-limits stipulated in accordance with the research interviews. The beginning of the mock interview therefore indicated panel members moving from semi-formality to formality, in line with what was deemed to be expected in "real" research funding interviews.

The modulation of atmospheres of formality during the preparations set the scene for the presentation and interview stages of the mock interviews. Although Dr. Carey's did not require a presentation, Dr. Hip and Dr. Tech made concerted efforts to modulate the atmosphere of their presentations. Dr. Hip excitedly hopped back and forth between the laptop and a space in front of the wooden table as if attempting to modulate atmospheres of anticipatory excitement. In front of the projection screen, words spoken were emphasised with height-increasing bodily posture aiding vocal projection. Often supported by drawing in the air or reaching forwards with wide eyes as if offering some very important knowledge to the panel, an atmosphere of excitement and anticipation was modulated. Dr. Tech paced up and down in front of the projection screen as if warming their muscles in preparation for an arduous sporting event. In the first, Dr. Tech clutched a piece of paper whilst rolling their hands at the elbow as if juggling knowledge the panel were sat waiting to receive. Upon building an atmosphere of anticipation, Dr. Tech was interrupted due to exceeding the time-stipulations. During this moment, arms and eyebrows were raised thus modulating an atmosphere of disappointment which was avoided during the second mock interview in which an atmosphere of anticipation and excitement was maintained.

Although modulating atmospheres of anticipation, these atmospheres were modulated to maintain an element of formality. This was achieved in Dr. Hip's interview by their

remaining standing whilst emphasising authoritative grasp of the research with technical and theoretical terminology later discussed by the panel as "jargon". Dr. Tech's choosing to sit at a table in front of the panel during the interview stage modulated an atmosphere of slight informality. Dr. Bop's, however, involved a struggle on the part of the academic panel to modulate the required atmosphere of formality. For instance, one panel member, for most of the mock interview, slouched in their chair in a laissez-faire manner. Holding their head representative of apathetic distraction, this academic had also forgotten to prepare any questions and apologised when asked to pose one before clutching their face in an atmosphere of contemplation. The lead, attempting to maintain an atmosphere of formality, quickly moved to the next academic but found that they, too, required more time to prepare. In Dr. Tech's second, one panel member modulated the atmosphere consecutively and unexpectedly, similar to the situation discussed in Chapter Five in which lecturers used unexpected methods to foreground the expected. Upon asking a question, this panel member claimed to have "not read the research proposal at all", an excuse which made light of everyone else's lack of preparations, and then claimed to have only "skimmed the proposal". As laughter erupted, this panel member, clearly having read the proposal, modulated an atmosphere of informality to appeal to their panel-peers and through which the required formality was emphasised.

During the feedback stage, all researchers audibly exhaled as if an arduous labour had concluded. Dr. Hip expressed nervousness at presenting to peers and Dr. Tech swung their left arm in an atmosphere of frustration due to the time-stipulations and whilst expressing similarly. These atmospheres were often re-modulated to be more supportive whereby the panel responded with "these were tougher questions that I've seen on panels" but "you had good composure" and "you seemed excited" and "that is a really, really, really, really good thing" because "half the mark ... is about the person" – to which others nodded and affirmed with "mmm". Furthermore, in Dr. Tech's first, whilst bags and laptops were collected, a small group formed around one academic after their asking questions in an antagonistic manner. The lead, approaching and touching their shoulder, exclaimed that they were "so harsh!". This academic immediately changed, now nodding with wide-eyes and smile before both of their faces creased in unison. Moreover, at the end of Dr. Carey's, I presented informed consent forms as to avoid interrupting the introductory preparations. Although all participating knew of my presence, an atmosphere of concern was modulated by a sociologist suggesting "that's not ethical conduct" whilst another, a criminologist, modulated an atmosphere of confusion by very carefully reading the form in a disgruntled manner. This latter example shows how the modulation of atmospheres indicates academic personae in mock and real research interviews, and through which we must also consider

how non-humans – beyond tables and chairs – act to modulate atmospheres in mock research interviews.

Unlike the antagonistic atmospheres modulated by the panel, responses by the interviewees were also informed by non-humans. This contributed to the modulation of the atmosphere of the mock interviews and through which each interviewee represented their academic personae. This involved each interviewee presenting and answering questions as academic researchers in a way expected in academia. However, the use of non-humans reflected the way each interviewee modulated atmospheres in order to be perceived, and through this treated, in particular ways by the panel. For example, during each mock interview, the candidates conducted their interview and presentations with pieces of paper containing supporting notes. The use of these small pieces of paper in the case of Dr. Carey, Dr. Tech and Dr. Bop – and a piece of paper and orange covered iPad in the case of Dr. Hip – punctuated the atmosphere of formality modulated by the panel. The pieces of paper and iPad therefore communicated that this was indeed not a "real" research interview but a preparatory one in which each interviewee was not fully prepared. I therefore understand these seemingly insignificant pieces of paper as communicating that the panel – the interviewees' peers in the same university – should, when asking antagonistic questions, consider that they, their peers, might not yet be fully prepared. In this case, any blunders in responding to questions in the mock interview might be due to a lack of preparation as indicated by the paper, as opposed to problems associated with their research.

The modulation of atmospheres in the mock interviews has so far been described as, in part, accomplished through non-humans. However, Dr. Carey's is a clear example of how atmospheres are modulated by non-humans in which visions of disciplines and academic personae are communicated. Dr. Carey's mock interview involved expressions of illness in which atmospheres were modulated to receive sympathy from others themselves avoiding handshakes due to illnesses lingering from the prior holiday period. Upon entering the mock interview, Dr. Carey took a seat at the meeting-style table in a chair opposite the panel. Draping their left arm and occasionally both hands over, an apparent "stomach bug", the mock interview was complemented with apologies for such an illness. As a result, an atmosphere of sympathy was modulated indicated in responses by one academic posing questions whilst showing understanding of Dr. Carey's situation. In these instances, interview questions were posed but increasingly foregrounded with supporting statements such as "these are very difficult questions" or "we know you're feeling ill today". Dr. Carey therefore modulated an atmosphere in which care was manifested which reflected concerns associated with the discussed research – how particular communities require

care – and through which Dr. Carey required a level of care during their preparatory mock research interview.

During Dr. Bops's mock interview, the lead – perhaps over-emphasising formality due to many of the panel forgetting to prepare questions – overtly attacked the way in which Dr. Bop designed the accompanying PowerPoint presentation slide. As a result, an atmosphere of antagonism beyond that modulated in the other mock interviews was modulated in the lead's stating in a very harsh tone that is was not possible to "listen to you and at the same time look at all that crap". Dr. Bop, momentarily, looked genuinely browbeaten as if not expecting such a harsh attack. As a response, Dr. Bop modulated an atmosphere of apprehension by stepping backwards. However, Dr. Bop, when asked whether they would sit down to answer questions at the "real" interview, responded by modulating an atmosphere of humour in which a disciplinary joke was evident. If there were a lack of chairs, Dr. Bop replied, he would "lean against the wall" or "sit down like this". During this moment, Dr. Bop "danced" to the door of the room. Leaning backwards, Dr. Bop then slid down the door to a crouching position as, perhaps, an alternative to sitting on a chair. An atmosphere of frustration modulated due to the lead panel members' own frustration at the panel's informality and PowerPoint slide design therefore led to Dr. Bop's modulation of atmospheres of humour to overcome the situation. This also indicated Dr. Bop's academic personae as concerned with dance as well as their use of humour to overcome criticism.

Dr. Tech's research concerns focused on the use of technology by people who play music, the fourth slide of the first presentation involving a short section of a song which modulated an atmosphere of celebration. During the feedback stage one panel member who was also concerned with music suggested that this might be used as "an opener". Interrupting, and although modulating an atmosphere of uncertainty, a supportive atmosphere was then modulated by this same panel member which was evidenced by their exclaiming: "but the music will make it memorable! You can see the conversation: oh yeah, that was the one with the music! ... and then the person who will defend you will say: yeah it looks like just waaaahh". Dr. Tech's clothing was also a noticeable feature of the mock interviews. In both, Dr. Tech wore washed denim jeans with buttoned-to-the-collar pale-blue shirt, black shoes, silver zigzag ear-studs and a trilby hat which was taken off during the interview. During a follow up discussion, I asked what Dr. Tech planned to wear in the "real" interview. An atmosphere of contemplation was then modulated. "That's a very good question", they said. They stated that they planned to seek advice from the research support officers or wear a suit "like in weddings or funerals" to modulate an atmosphere of respect for those on the panel.

Dr. Hip, however, represented their disciplinary concerns through the design of their

PowerPoint slides. The slides were designed using a black and red serif font complementing a number of pictorial sketches. This was also complemented by wearing a peice of clothing which was a part of their research. While hopping back and forth between the laptop and presentation screen, Dr. Hip tugged and pulled at the clothing when discussing it. This display modulated an atmosphere of astonishment in the mock interview, but, after Dr. Hip did not receive the funding after the first "real" interview, it was made apparent in the second mock interview that everyone considered the clothing at fault. This reflected comments by the panel that the designed slides combined with the clothing might be "too much" for "fuddy-duddy" researchers on the "real" interview panel. This threatened the expected atmosphere of a more-conservative seriousness – instead modulating an atmosphere of experimentation perhaps expected in "art" as opposed to "scientific" contexts. In the second mock interview, however, Dr. Hip presented in smarter more-formal clothing complete with brown brogue shoes with white socks as well as large plastic-framed eyeglasses and a thick leather cuff. This suggests that clothing is an important consideration in communicating research interests and also suggests that research interests must be communicated in relation to the normative expectations of the wider professional context in which it is communicated.

Breaching mock interviews

To accompany the observations, I designed a mock interview breaching experiment for those hosting and being interviewed in mock and "real" research interviews. I designed the experiment to complement my observations of the use of clothing during the presentation of research in research interviews. First, I attempted to set up some meetings in which I planned to inform the potential participants of the fact that the workshop would involve a breaching experiment much like the *Technical Difficulties* experiment in Chapter Four. However, I also planned to inform the participants of the details of the breach as I did in the *Old School* experiment in Chapter Five. In this way, I wanted to apply the learnings from both Chapters Four and Five to further overcome the idea of breaching experiments as an unethical or anxiety-inducing (Mehan and Wood 1975: 113; Gregory 1982: 50) method of design data collection (Crabtree 2004; 2004b; 2004c). I chose to explore this approach due to the success of the workshop-style experiment in Chapter Four and the problems faced in the quasi-breaching experiment Chapter Five in which the lecturers appeared to want to engage in the design of the breach as suitable for them. I therefore anticipated that the participants would want to engage in the design of a breaching experiment as a type of workshop activity (Poole 2012; Nilsson et al. 2019) due to the fact that this was a type of personal experiment for them, too (Marres 2012: 79; Guggenheim et al. 2018: 69).

Initially I designed the workshop by drawing on learnings derived from the observations and redesigning the mock interview accordingly. The workshop aimed to offer research candidates another opportunity to receive feedback by the panel regarding verbal and behavioural presentation including technical, theoretical or methodological research issues. However, the latter part of the workshop was designed to focus on the use of clothing outfits – including clothing worn and other non-humans one may "clothe" oneself with. I chose to focus on this to support the research candidates in exploring an alternative way of refining their research presentations and through which I might learn about their use of non-humans. As research candidates often have more than one mock interview in preparation for "real" ones, this mock interview is conceptualised as the final mock interview that is undertaken. This is where the finishing touches to the design of the researcher's self-presentation is considered, in particular, how such considerations might emphasise how knowledge is often presented through self-presentation. To support this process, I planned to invite the research support officers facilitating the mock interview to offer feedback alongside the academic panel. Although potentially useful, this breach is an epistemic intervention designed to explore people's methods of communicating knowledge of their research subjects and academic personae using non-humans.

The breach intervention is made up of four outfits designed to complement the researcher's subjects. I planned for these outfits to be designed in collaboration with the lead member of the academic panel hosting the mock interviews in the same way as I had discussed my proposals with the art history and mathematics lecturers. I planned for these outfits, once approved by the lead panel member, to be hung on a clothes rail with a variety of non-clothing accessories located in another room in proximity to the mock interview – the "changing room". After presenting once, the researcher enters the changing room and chooses an outfit; while they change, the panel considers how their research is presented. The researcher chooses the new outfit and then re-enters the mock interview and conducts same presentation. The panel then gives feedback related to the research, the research subject and the emphasis of this using clothing. Another round is then undertaken, until all four outfits have been used. Consensus is then made as to which outfit is most suitable as a starting point for the design of the researcher's self-presentation in the "real" interview. The process terminates when all agree on a style.

I expected that those I invited to be involved would consider discussing and attending the workshops and find it either a useful or interesting experiment. I perhaps expected, too, that these people would understand that I was a designer and that this workshop was intended to be useful. Furthermore, I expected that this experiment would involve designing some outfits for use in the mock interviews that I would discuss with the lead panel member

to ensure their suitability. I expected each outfit would be designed in relation to, primarily, the researcher's discipline and, second, their research subject. I expected that these outfits would be of different qualities related to the appearance of scientific personae, which, as we have discovered, are a combination of the professional expectations of any given organisational situation and the research candidates. I therefore expected I would be provided an opportunity to consider the researcher's academic personae in relation to the first chosen outfit, thereafter, considering how quasi-scripts obtain different versions of personae as informed by the non-humans. I planned that one outfit should be casual whilst another formal. Another outfit was planned to be a "joke" and another with features emphasising a relevant research subject. My expectations were that this process would be conducted smoothly, that everyone would enjoy this mildly humorous-yet-useful workshop – the outcomes of which would further reveal how academic personae are refined in mock interviews through the use of non-humans.

The unexpected in mock interviews

I expected that my proposed workshop would allow me to explore a quasi-breaching experiment. Before I could, however, some other events interrupted my research. This was revealed in October 2019 during which time I started to connect with those perhaps interested in being a part of the workshop. This involved reaching out to the research support officers facilitating the mock interviews who invited me to join one of their monthly meetings to communicate my research and explain the workshop to the team. As members of this team had already facilitated my attendance of some of the mock interviews, I prepared and presented a short PowerPoint presentation outlining my interests, and, through which, I proposed the workshop. In the presentation, I focused on the use of non-humans to complement the presentation of knowledge in the mock and "real" research interviews. After outlining my observations related to the importance of design, I concluded by discussing how the clothing worn during the research interview may aid candidates acquire funding.

During the meeting, I was assigned a member of staff with whom to liaise through e-mail. I was also informed that there were no planned mock interviews. I thought this might have been due to research interviews happening at six-month intervals, but the real reason was hinted at in another meeting with a head of research conducting mock interviews. I approached this meeting after attempting to contact another lead panel member I had observed in a mock interview but who seemed to not want to discuss the mock interview workshop with me. During this meeting, I outlined my research. Whilst interest appeared to be expressed, it was similarly suggested there were no mock interviews planned. During October 2019, Great Britain was in the beginning stages of what was referred to as leaving

the European Union. This means that the funding interviews the mock interviews were used to prepare for, along with the UK's status in relation to the European Union and its sources of research funding, was unknown. I followed my enquiry through to January 2020, a time in which Brexit negotiations were still taking place. I was, however, met with a lack of response entirely. Upon contacting the lead panel member again, I mentioned my interest in continuing to observe any mock interviews that may or may not arise. It was suggested that there were no mock interviews, but another type of meeting was being held with those facilitating mock interviews. I expressed interest in joining as well as mentioning my interest in discussing the idea of the workshop. However, it seemed that due to my mentioning the workshop, I was met with no response and as a result did not attend the meeting.

Moreover, during late 2019 and early 2020, another situation disruptive to the usual routine of the university appeared. This further impeded my ability to discuss the workshop and my research with the academics. During this time, the University College Union had voted to hold a series of strikes through which an atmosphere of tension was modulated in the university. In this case, another breach not of academics' but universities' expectations by academics appeared. Many researchers therefore engaged in sacrificing salaries to put a stop to their research and other university obligations including teaching and attendance of peer-review situations. The moments when I wished to engage in discussing the workshop meant that many academics were either standing on picket-lines, or, perhaps, not available due to their backlogged academic work. Moreover, the first round of strikes occurred prior to the winter holiday and the second after this further obscuring the meetings. Uncertainties regarding the availability of research funding compounded by academics' concerns regarding their salaries, pensions and working conditions modulated atmospheres of uncertainty and tension I now realised would alter my ability to undertake this research.

As the end of the second strike period approached, and as quite some time had at this point passed, I nevertheless decided to continue preparing some e-mails requesting meetings with the research services department and academics involved in mock interviews. Although it was unlikely that the Brexit situation would resolve, I nevertheless approached with the idea of conducting the same experiment but communicating this to potential participants as a mock-mock research interview – an exploration perhaps useful for the next "real" mock interviews. Due to this, I was therefore engaging in a similar process to that with the lecturers, as discussed in Chapter Five – of turning a breach I and my research was now subject to into an otherwise useful quasi-breach enabling me to complete this research as initially expected. I, in earnest, began to design a poster to mediate the conversations which expressed my desire to explore clothing outfits in a type of mock interview disciplinary fashion show. Unfortunately, yet another situation even more disruptive of not only my

research but the operation of universities appeared – COVID-19 which was declared a worldwide pandemic by the World Health Organisation. When reflecting on this series of major breaches, however, I considered it too easy to suggest that the workshop did not happen due to these large-scale events beyond my control. Instead, the exploration of the refinement of academic's personae I was undertaking appeared relevant to this research, and my undertaking of it, too.

6.1: Poster sketch I did not use to discuss the workshop *Changing Rooms*.

Academic personae in mock interviews

By considering how academic researchers present their academic personae, it became apparent that I was presenting a particular type of academic personae during this research. I believe this oversight played a key role in my inability to hold the *Changing Rooms* workshop. This was evident in very specific responses by those involved in this research – research support officers, research interviewees and the mock interview panel. The first occurrence was made apparent when I handed an informed consent form to the academics forming the academic panel at the wrong time. Although I consider this instance reflective of a mistake in my judgement, upon further consideration I understand this as also revealing the academic panel members' expectations of my work as associated with a type of social researcher. In this case, the academics understood my presence as reflective of undertaking a similar form of research operating under similar ethical guidelines, or, the same way as they would themselves as social scientists. Although partly true, this also meant I was not clearly communicating that I was a specific type of designer, or, a type of designer with an interest in aiding researchers work through breaching experiments. This particular non-human – a consent form written and formatted in a particular way yet offered at the wrong time – rendered me a "peer" and through which each on the panel considered my presence in relation to their own disciplinary concerns.

My being considered a peer was also evident in two of the follow up interviews. The first notable feature of these interviews was both Dr. Hip and Dr. Tech's building on mentioning nervousness or discomfort associated with presenting in front of and being interviewed by, specifically, peers. This was corroborated during the follow up interview with Dr. Carey. After meeting and expressing thanks for taking the time to meet with me, Dr. Carey then mentioned speculating with a colleague prior to the meeting about what I'd like to discuss. As I nodded and briefly outlined my research, Dr. Carey stated that "it's probably something to do with knowledge, then". After this brief exchange, I presented the consent forms after which I offered a second for signing and for Dr. Carey to keep. Gladly accepting, another speculation on my intentions was evident in Dr. Carey's saying, "I wonder how you've framed this on here". Initially, these statements seemed to suggest the obvious – the fact I was indeed a doctoral researcher involved in "something to do with knowledge" then "framing" as to communicate this on consent forms. Dr. Carey, however, seemed to express disbelief at my being a designer trying to aid academics to improve their mock interviews. My project was, therefore, deemed social research conducted about my peers thus "disguised" by design – further corroborating my status as peer.

There were, however, indications of my being considered a designer by those associated with the mock interviews. After discussing the mock interviews in a follow up

discussion, Dr. Tech asked me where, given a specific set of design interests, their child should go on to study a master's course in design. Furthermore, after the conclusion of the observations, I presented my research to those in the research support office in a monthly management meeting. During the short presentation, I discussed my findings whilst foregrounding the role of clothing as potentially aiding the presentation of knowledge in research interviews. Although the response was favourable, in both cases it was clear that Dr. Tech and the research support officers viewed my research through the lens of their own interests – rather than in relation to an explanation given by myself. By taking into account my attempts to discuss the workshop with two of the lead panel members prior to the strikes and COVID-19 – discussions which were either refused or ignored through a lack of response to e-mails – it is clear that the presentation of my academic personae to researchers concerned about being studied by a peer was of importance.

To further understand this, I will now refer to Chapter One where I drew on Morgan's (2006: 417) suggestion that we can use "different metaphors to bring organizations into focus in different ways" and to which I added that organisations can be understood as a "multitude of scripts". In the same paragraph, I drew on Nolas and Varvantakis' (2019: 140) suggestion that researcher's creativity is often constrained by universities and located outside of them. This means that my self-presentation not only remained unclear, but it did so in discussion with people who are "entangled" in the quasi-scripts of the university, in which they are required to negotiate their research. This observation has two related implications. First, if the academics I discussed my research with did not understand my self-presentation nor research; they could not clarify their interest in participating, nor would they have been able to respond to questions about their participation from people such as university managers. Second, this means that I did not go through these relevant gatekeepers to build consensus for undertaking this "change" oriented research and who may have needed to understand it to allow it to take place. In other words, if my inability to undertake this research was due to my inability to self-present as a quasi-designer, and even if I had discussed this with the relevant gatekeepers, I would still have needed to self-present clearly and appropriately so that they could understand my research intentions, too.

The failure of an appropriate expression of my academic personae explains why those I asked to take part in this research understood my intentions in relation to their own pursuits. Initially, this explains how the academic panel expressed an understanding of my research as sharing their agenda of producing a particular type of knowledge. This also explains why the mock interviewees engaged in a type of meta-investigation of my research intentions, or, what I was "really" doing with design. Although it is of course partly true that I engage in producing social knowledge, I initially understood my participants' concerns as related to

Sarah Williams and Frederick Klemmer's (1997: 165) discussion of their being met with resistance as cyborg anthropologists engaged in observing other cyborg anthropologists. Although Williams and Klemmer state that other academics' concerns are associated with being subject to observations of the type they themselves undertake in other communities, such concerns are more likely associated with – as Roddey Reid and Sharon Traweek (2000: 9-10) note in considering rebuttals to interdisciplinary researchers' attempts to research other researchers – not only being subject to observation but that this may lead to one's "settled certainties" being "disturbed", specifically, by those deemed *peers*. It is therefore clear that the resistance to my work was due to my lack of self-presentation in relation to a multitude of quasi-scripts constituting the university. In the university, both I and the participants I wished to work with are required to self-present and to settle any uncertainties related our research taking place, as opposed to it being disturbed by the ever-fluctuating quasi-scripts of the university – some of which are disturbed by peers during their research.

Quasi-designers

To further reflect on how I communicate quasi-design, I must now consider my use of non-humans during this research. As I claim in Chapters One and Three, the quasi-designer draws on affirmative, critical and speculative design. As defined by Dunne and Raby (2013: vii, 34), affirmative design supports an economic status quo. Critical design (Dunne and Raby 2001: 58; 2013: 11; Malpass 2013: 343; 2017: 67, 113), however, involves "stepping away" from designing in favour of commerciality whilst using humour as a form of critique. I consider designers as producing products relevant to commercial organisations as affirmative design; gallery or other shows relevant to cultural organisations as critical design; and various types of academic knowledge relevant to academic organisations as speculative design. Although this research took place in a university, to claim my intention is to produce academic knowledge would claim this work is speculative design. In claiming this, it is of course possible to argue post-hoc that the "design" element of this work is somehow "useful" to those encountering it. However, this research demands the clear presentation of the *intentions* of the work, made evident by working not with lay people but with academic research participants fully aware of research processes and equipped to question the ambiguities of interdisciplinary work. This revealed my failure to communicate that quasi-design is only quasi-design if it first assumes a position of affirmative design. This would have been to foreground my intention to aid academics improve their presentations. Of course, I do this using an element of humour and I write about the outcomes of such as suitable to the expectations of the academic context in which this research takes place.

My interactions with the research participants are therefore reflective of how I

appeared, based on my failure to communicate the concept of quasi-design. During my observations I did not appear in a way one might commonly expect of designers. Although I informed those involved of my status as "designer" undertaking research in a design department, I left the definition of design open to interpretation. On top of this, I conducted my observations in a manner typically associated with the social sciences. From my participant's perspective, I attended the mock interviews with a laptop, notepad and small audio recorder followed by another meeting in some follow-up interviews. I did try to make clear the fact I was a designer by saying and writing this on consent forms. My actions, however, contradicted this as consent forms are not typically associated with design. I also dressed as I typically do, in a way often associated with designers – by wearing t-shirts more casual than shirts, black-framed glasses and trainers. However, I did not present any "design work" through which I demonstrate quasi-design. In this instance, the participants perhaps saw me as someone using an unclarified theoretical notion of design to conduct research as speculative design. My interactions therefore modulated an atmosphere of observation, as opposed to support through which design is used to aid participants' work.

By leaving my definition of design open I may have, instead, been considered as a type of critical designer. Being considered as a critical designer, however, might have suggested that I was approaching the context in which the research takes place in a critical manner. For the participants – again building on the way in which I undertook observations – I may have been considered a critical or critical-speculative designer. From this perspective, the participants may have considered me not only as a peer intending to produce knowledge of their methods of conducting presentations but may have considered my request to discuss a workshop as an attempt to build on this and criticise or make light of their academic efforts as well. Without the means to state or be known otherwise, my research participants might therefore have imagined a quasi-script in which atmospheres of ridicule were modulated. It is therefore understandable why these academics would have preferred not to engage with the proposed breaching experiment.

This situation emphasises the importance of communicating quasi-design carefully, particularly in contexts in which others hold associated disciplinary concerns. For example, the relationship between design, science and technology studies and ethnomethodology is of importance to this research. I might have therefore argued that I approach design through the lens of science and technology studies and through which any human-non-human script constitutes design. I might have argued that by breaching situations such as mock interviews, I produce knowledge as an ethnomethodologist might. I could have therefore argued that I still, theoretically, constitute a "designer". However, to argue this relies on my research participants' knowledge of these academic interests. This would take a very long

time to explain – especially if working in organisational contexts with those unfamiliar with such ideas. Furthermore, in academic settings, this process might then have fallen into academic discussion distracting from my research aims. Moreover, this overlooks the concerns of my research participants, who I here describe as hesitant to engage with such a project. Most importantly, this overlooks the possibility of the wider expectations of design and designers who, regardless of disciplinary alignment, operate to improve or build on the functioning of their favourite organisations – commercial, cultural or academic – which are all part of a wider economic status quo. To overlook designers' inevitable attempts to improve organisations is to overlook the potential of affirmative design in enabling quasi-design in academia and other organisations, too. To mediate quasi-design research, it would be beneficial to design some tools through which the atmosphere of quasi-scripts is modulated and to communicate the personae of the quasi-designer.

Conclusion

In this chapter, I undertook a major breaching experiment that began as observations of the affective qualities of mock interviews in a university. These observations revealed that mock interviews are situations in which non-humans play a key role in contributing to academics' self-presentation. Specifically, I became interested in how mock interviews might be adapted to consider the design of academics' disciplinary clothing as aids to the presentation of their academic personae. I set about designing a breaching experiment similar to that developed in Chapter Four, which I aimed to discuss with the participating researchers, as in Chapter Five. In other words, I considered how to design a quasi-breaching experiment and translate this into a minor breaching experiment. This experiment, however, translated into a major breaching experiment due to, ironically, a fault with my own self-presentation. Due to this, I realised I was considered in relation to the academic context in which sociologists, psychologists and cultural studies researchers were engaged in their own interdisciplinary studies and, neither did I discuss this research with the relevant university gatekeepers. I was therefore considered a peer with a similar research agenda as opposed to as a quasi-designer who desired to contribute to their research presentations. This chapter is therefore a reflection on a major breaching experiment *and* foregrounds the importance of the academic personae of the quasi-designer. "Clothing" is therefore as important for modulating mock interview atmospheres to communicate my research intentions as much as it is for my participants in research interviews. To conduct quasi-design, one must not only attempt to breach quasi-scripts or offer the opportunity for research participants to re-design quasi-scripts as quasi-breaches. Being a successful quasi-designer involves presenting quasi-design so as not to be mistaken for the wrong type of interdisciplinarian.

Conclusion: Quasi-design in academia

In this research I developed and used three types of breaching experiments to explore conference, lecture and mock interview presentations. This demonstrated that scripts contain atmospheres through which we can understand them as affective quasi-scripts. Furthermore, when breached, quasi-scripts affect people in response to which they reveal their expectations of presentations and how they maintain their ideas of the world. In this conclusion, I draw on this to answer the three questions posed at the beginning of this thesis by extrapolating: how academic presentations can be explored as socio-material scripts; how academic presentation scripts can be understood as affective; how academic presentation quasi-scripts can be understood as significant. I answer these questions by focusing on the findings of this research as relevant to three audiences. I first address my return to what might be considered the "classical" concerns of ethnomethodology and actor-network theory and how I developed three breaching experiments through which I developed the notion of the quasi-script as relevant to those concerned with ethnomethodology and actor-network theory. I then address how I bring these breaching experiments to bear on quasi-scripts as an interdisciplinary method of design-led social research called quasi-design as relevant to interdisciplinary researchers between design and sociology. I conclude by suggesting that we can explore academic presentations by breaching them in three ways. Through this, we can understand the affectual methods used by academics in maintaining their expectations in quasi-scripts. I conclude by considering academic presentation situations in which academics use these affective methods as a form of self-presentation. Through this, academics enrol others in joining them in keeping their disciplinary expectations and therefore those of the social world around them alive.

Exploring academic presentations

One of the concerns of this research is employing different types of breaching experiments to explore academic presentations. One of the main findings is that there are three types of breaching experiments: minor, major and quasi-breaching experiments. Although this is important for exploring academic presentations, this is also important for considering the presentation of breaching experiments themselves. In Chapter One, I outlined my prior practice as involving different breaching experiments and suggested that minor and major breaches are accepted or resisted by the people subject to them. In Chapter Four, I explored

the design of a minor breach to appeal to the participants of a European Association for the Study of Science and Technology conference workshop. I drew on the principles of affirmative design to design the experiment to help the participants explore the use of unusual images in their presentations. I drew on the humorous nature of critical design to explain the workshop as an exploration of a technical difficulty in presentation, through which the workshop was rendered appealing. This experiment is a minor breach as the details were neither revealed by me nor resisted by the participants. In Chapter Five, I explored a similar experiment in a mathematics lecture at University College London and an art history lecture at the Courtauld Institute of Art. Conversely to the workshop described in Chapter Four, I proposed the experiments whilst revealing the details to the lecturers. Due to this, the lecturers engaged in discussing and thereafter re-designing the breaches with me. This revealed a new category of quasi-breaching experiments that are neither accepted nor resisted but re-designed with participants. Chapter Six, however, explored a major breaching experiment. Although I attempted to engage the participants in re-designing the experiment, it was nevertheless resisted. This was useful as it informed me of the complexities of presenting quasi-design research, which, pertinently, involved presenting breaching experiments to peers who also held interdisciplinary research concerns.

Academic presentation can therefore be approached as an object of investigation by way of breaching experiments. From this, a contribution to scholars associated with ethnomethodology, computer-supported cooperative work, human-computer interaction and technomethodology can be considered. In classical ethnomethodological literature, reports of breaching experiments ironically reflect Garfinkel's (1967: 47) breaching experiments which are described as reacted to with hostility or dismissed as a joke (Garfinkel 1963: 202). In this literature, breaching experiments are described as unethical and anxiety-inducing (Mehan and Wood 1975: 113; Gregory 1982: 50). Others, however, consider them a joke and describe them as "candid camera sociology" or like a "practical joke" (Gamson 1974: 218; Lynch 1993: 140). In current ethnomethodology literature, specifically, a special edition of the journal *Human Studies* titled "Special Issue on Studies in Ethnomethodology", the origins (Lynch 2019) legacy (Meyer and Endreß 2019), culture (Meyer 2019) and contribution of ethnomethodology to ethnomethodological studies of the workplace (Greiffenhagen and Sharrock 2019) – as well as the impact of specific concepts including indexicality (Kelly 2019), the documentary method (Schüttpelz 2019), accountability (Koschmann 2019) and experiments in miniature (vom Lehn 2019) are discussed. Although breaching experiments are considered "the better-known set of experiments" (Kelly 2019: 207) as well as "self-evident in everyday interaction" (Schüttpelz 2019: 223), they are only briefly discussed.

Upon exploring my own breaching experiments as well as reading the literature associated with breaching, I often felt surprised how quickly these experiments were disregarded. Moreover, I felt that the breaching experiments undertaken by designers were often very similar "disruptive" versions devoid of alternatives that might alleviate these concerns. This includes those undertaken by ethnomethodology-inspired computer-supported cooperative work and technomethodology scholars who use breaching experiments to explore design but, in only two examples, explore how design might be employed to present breaching experiments differently. In Chapter One, I discussed some of these examples including Mann's (2003) use of visible personal surveillance equipment in a shopping mall which was subsequently discussed by Crabtree (2004; 2004b; 2004c) who suggested that breaching experiments are useful for design-data collection but not for those subject to them. Two further examples, however, explore the design of workshops in which breaching experiments were formulated as "homework assignments" (Poole 2012) or as hypothetical future scenarios that offered the participants an opportunity to speculate on design-related issues that were of interest to the designers (Nilsson et al. 2019). Although these breaching experiments pertain to the use of design to present the breaching experiments in alternative ways, these design scholars only do so in ways that allow them to justify their use of breaching experiments to collect design-data. In other words, these breaching experiments are still only concerned with data collection and through which design is used to justify a rather typical breaching activity.

Organisational sociologist vom Lehn (2016: 74), however, discusses breaching experiments as "tutorial exercises" which reflects Benson and Hughes (1983: 195) discussion of breaching experiments as potentially useful for academics to reflect on the work practices they are often "blind to ... accomplishing and ordering". Interdisciplinary scholars Marres (2012: 79) and Guggenheim and his co-authors (2018: 69) take this further by considering how breaching experiments might be designed as "experiments in living" through which participants explore "practices of the self". This means that the participants of breaches may even subject themselves to breaches that they consider useful to alter particular situations and invent new ones. The development of minor, major and quasi-breaching experiments in this research therefore draws on but also forms a contribution to explorations of breaching experiments in the disciplines of ethnomethodology, technomethodology and interdisciplinary social research. By returning to explore the breaching experiment, this research offers a revitalised perspective. This is useful to overcome what appears to constitute an ethnomethodological impasse whereby breaches are considered merely unethical and anxiety-inducing, or, "too hot to handle". To overcome this impasse, I draw on technomethodological investigations of breaching experiments as designed workshops, but

which currently only consider design data-collection opportunities as opposed to the potential of designing these experiments to benefit their participants, too. To overcome this second problem with breaching experiments, I also refer to the work of interdisciplinary social research scholars. These scholars suggest a way forward that is reflected in the breaching experiments I designed. To explore the academic presentations in this thesis, I designed my breaching experiments as design workshops that offer the participants an opportunity to explore their presentation practices and from which data was collected by myself. Exploring academic presentations with breaching experiments in academia not only requires designing and presenting them to alleviate audiences' anxieties. It requires presenting some benefits to the presenter-subjects who may be part of and desire to draw learnings from these breaching experiments and productively engage in exploring academic presentations for themselves, too.

Presenting academic expectations

The exploration of the affective qualities of academic presentations in this research would not have been possible without applying the breaching experiments discussed in the last section to *scripts*. By breaching scripts, their affective and atmospheric qualities were revealed. In Chapter Two, I explored prior literature associated with actor-network theory's notion of script. In this discussion, I described how scripts are designed by designers to have varying levels of flexibility. I explored how this informs not only the multiple possibilities related to what people become in scripts but how scripts contain atmospheres which affect people and with which they identify. I therefore claim that this informs people's responses to, what they subsequently become and how they thereafter interact in scripts. In doing this, I explored how other scholars discussing actor-network theory explore affect and atmospheres, specifically, Verbeek's (2005) post-phenomenological "post-script" philosophy of mediation. I, however, disagreed that we need to consider studies involving scripts and the notion of affect as post-script. I thereafter drew on the work of scholars in cultural geography. I suggested that social and organisational sociologist Brown and his co-authors (2019: 21) suggestion that atmospheres are located in "places" might be better considered in human-non-human quasi-scripts and explored through what I claimed are the central object of these studies – minor, major or quasi-breaching experiments. Moreover, I drew on Wetherell's (2012: 4) and Latour's (2004: 206) suggestion that we focus on people's affective practices which I thereafter consider in relation to people's physical interactions in what I refer to as *quasi-scripts*.

I first explored this in Chapter Four in which I outlined the notion of quasi-script through describing an experiment with science and technology studies scholars in a

conference presentation workshop. In this workshop I breached scholars' presentations by introducing some PowerPoint slide-sets containing unusual images. I humorously named the workshop "Technical Difficulties" and described the images as replacement images used during a hypothetical technical difficulty. During the workshop, the participants used these images to modulate atmospheres of humour to overcome the difficulty and through which I understood scripts as containing atmospheres. Scholars such as Brown and his co-authors (2019: 21) may therefore approach explorations of affect and atmospheres by using the more specific notion of quasi-script. This might be further considered in relation to Chapter Two where I discussed Guggenheim's (2010) factory as a loose script and through which we can begin to understand quasi-scripts as "places". As I also suggested that bringing breaching experiments to bear on quasi-scripts allows us to explore what Wetherell (2012: 4) refers to as people's affective practices and what Latour (2004: 206) calls "body talk", we might understand people's modulation of atmospheres in response, too. I therefore contribute to Farías' (2014: 26) concerns associated with actor-network theory's lack of "conceptual repertoires capable of accounting for virtual processes" including "affect". This includes more-recent discussions of actor-network theory and affect in geography (Müller and Schurr 2016) and how organisational practices might be considered affective in organisation studies (Lamprou 2017; Sage et al. 2020). I therefore clarify a way we can begin to consider Latour's (1999: 22) question as to how we might describe the way "one is affected by" non-humans and to which we learn to respond in particular ways (Latour 2004: 206). This research contributes to this by including a way of apprehending the affective qualities of scripts. I bring various types of breaching experiments to bear on quasi-scripts as well as provide a way of looking beyond physical interactions to explore people's modulation of atmospheres to maintain appropriate conduct in academic presentations.

I carried this interest forward in Chapter Five where I similarly proposed some breaching experiments involving "old school" presentation technologies to a mathematics and art history lecturer. Each lecturer responded to each experiment by discussing the atmospheres my breaches may have modulated. Through this, I learned of their own and student and university expectations of their lecture presentations. As this research is undertaken in academia, it must therefore also contribute to wider science and technology studies of academia such as those outlined in Sismondo's (2019) special edition of the journal *Social Studies of Science* which reports on different facets of academic lives and cultures. In this special edition, Sismondo presents a variety of studies that explore issues as diverse as academics' production of grant proposals (Philipps and Weißenborn 2019) or the importance of curricula vitae (Kaltenbrunner and de Rijcke 2019) as well as how professors are made in universities (Hamann 2019) and how disaster stories are used as a form of socialisation in

science laboratories (Wylie 2019). These scholars might therefore consider the application of various types of breaching experiments to the presentations given in academic settings. Specifically, they might do so to look beyond situations involving the analysis of paperwork or talk to engage, firstly, with academic practices in situations including, but not limited to, presentations. Moreover, these scholars might also draw on quasi-design to explore the specificities of people's interactions in and experiences and expectations related to the academic contexts in which they work.

In Chapter Six, I also engaged with the design of a breaching experiment that explored academic self-presentation through the introduction of alternative outfits to complement mock and "real" research interviews. The breaching experiment I proposed, however, was resisted by the academics I desired to work with. This was due to what seemed to be a confusion as to whether I was a designer or a sociologist or another type of interdisciplinary researcher. In other words, whilst studying the methods of self-presentation of some interdisciplinary scholars, I failed to take into account my own self-presentation as a particular type of interdisciplinarian, namely, a quasi-designer. In this situation, I was deemed to be a peer and therefore found no opportunity to undertake another breaching experiment. A further contribution is therefore to scholars associated with "post-ANT". Specifically, in Law and Hassard's (1999) edited collection *Actor Network Theory and After*, Latour (1999b: 21) discusses the "largely untapped" possibilities of actor-network theory "that would not claim to explain the actor's behavior and reasons, but only to find the procedures which render actors able to negotiate their ways through one and another's world-building activity". Perhaps drawing on Latour's (1988) own commentary or that of de Laet and Mol (2000: 227), Gad and Jensen (2010: 58) consider the status of actor-network theory as a "Machiavellian management theory" which Olga Amsterdamska (1990: 496) refers to as a series of "strategies for winning battles, means of attack, trials of strength, and other forms of violence". This research can therefore be considered a reflection on the physical interactions as well as, specifically, the affectual methods used by actor-network theorists, science and technology studies scholars and other academics. This research serves as a point of reflection. It is a reminder as to how science and technology studies-informed scholars – including myself as quasi-designer – employ particular interactions and affective methods to modulate the atmospheres of quasi-scripts and present our expectations not only of academia but the wider world, too.

Academic self-realisation

The exploration of three types of design as applied to the design of three types of breaching experiments, in turn applied to explore three different academic presentation situations, was

achieved through the formulation of a method of design-led social research called quasi-design. So far in this conclusion I have described how this was achieved to explore academics' modulation of atmospheres in quasi-scripts through which their expectations of presentation situations and the world around them are maintained. In Chapter One, I outlined this process as involving drawing on two types of what I referred to as speculative design. The first type is what I referred to as "sociology inspired by design". This was defined in relation to discussions by Lury and Wakeford (2012) and Lupton (2017) of how methods from design can be used to conduct social research. I defined the second type of speculative design as "design inspired by sociology" which I defined through considering the work of Law (2004) and Marres, Guggenheim and Wilkie (2018) who suggest social research is in itself a form of design through which new social realities appear. I then outlined my prior practice as involving the design of different types of humorous or usefully appealing breaching experiments. As we have seen, I applied these to breach conference, lecture and mock interview academic presentation quasi-scripts. Through this, we learned of individuals' interactions as well as their affective methods. We also learned that these methods are used to maintain their expectations of appropriate conduct in these academic presentations and how they maintain the means through which they can communicate their expectations of the world around them.

Moreover, in Chapter One I suggested that quasi-design is neither a type of "design inspired by sociology" or "sociology inspired by design" but a type of design-led social research that accomplishes social research and social invention by drawing on these perspectives. As discussed in Chapter Three, as well as in this first section of this chapter, I achieved this quasi-research methodology by designing minor, major and quasi-breaching experiments. I found particular interest in Marres (2012: 79) and Guggenheim's (2018: 69) description of breaching experiments as something that might be employed beyond academic data collection as a form of self-exploration. This was demonstrated in Chapters Four, Five and Six. In Chapter Four, I successfully held a minor breaching experiment at a conference which I not only reported back on in this research but was informed of the usefulness of by the academics taking part. My observations and discussion related to a breaching experiment in Chapter Five was similarly undertaken due to the lecturers' interest in the potential usefulness of the design-led approach I offered. This was made apparent by the art history lecturer offering to participate in the breaching experiment that was otherwise disrupted by the COVID-19 pandemic. Although the mathematics lecturer refused to undertake a breaching experiment, the discussions regarding the re-design of the experiments were, at the time, considered interesting and proved interesting for me as a result. My inability to undertake any experiments with the mock interviews, as described in

Chapter Six, was useful as it forced reflection on my own practice, specifically with academic peers, and through which quasi-design can be further understood.

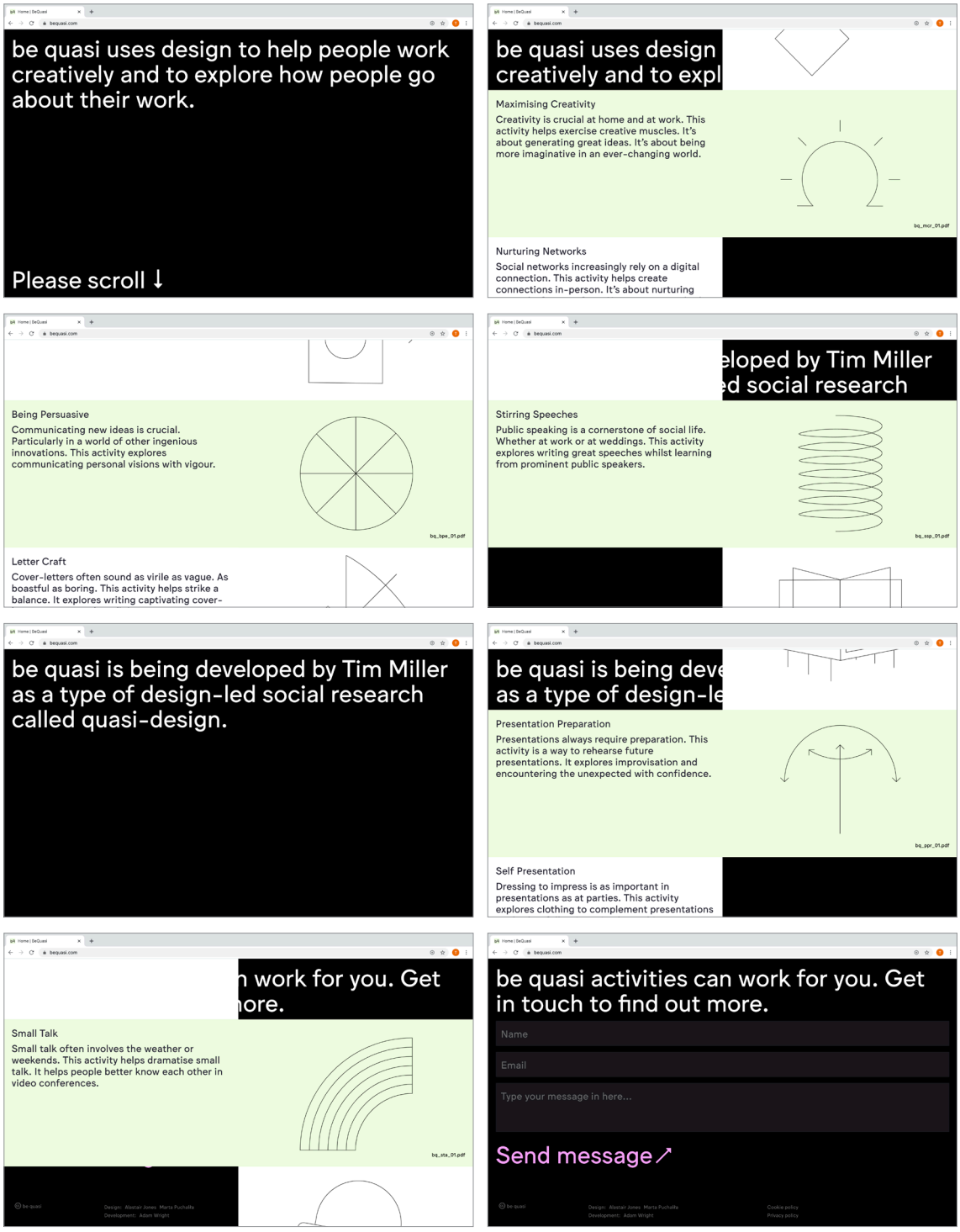
On the one hand, therefore, this research is useful for scholars interested in or situated between design and sociology. It is clear that by using this method I did indeed offer an inventive form of data collection which also considers the academic community I study, specifically, by offering some breaching experiments that help academics improve their presentation practice. In this sense, I was able to collect data that informed this thesis in which I present my view of academia and the world, and, through which, I offered other academics the opportunity to continue doing so, in different ways, too. This research is therefore a methodological contribution to the interdisciplinary fields of design and sociology and tells us of academic presentations. In Chapter Four, both I and the academic presenters at my conference workshop modulated atmospheres of humour to maintain our presentations. In the workshop, one of the participants often interrupted with jokes about the workshop theme, particularly at the beginning when my laptop stopped working thus reflecting my interruption of their presentations. In Chapter Five, both I and the academic lecturers used discussions about design as a means to allow our academic work to continue as expected. The mathematics lecturer resisted each of my breaches and thereafter responded to my "re-designs" and the art-history lecturer engaged in adapting my proposed breaches which I would have conducted if not for the outbreak of COVID-19. In Chapter Six, however, it appeared that both I and the academics I observed (but did not undertake any experiments with) had problems modulating atmospheres appropriate enough to realise our research interests in mock interviews. One researcher's PowerPoint presentation design was referred to as "crap", another placed music in and therefore interrupted the flow of their presentation, another was ill and struggled to self-present and another used clothing specific to their research subject rather than the formal context of the interview which, in the second round, was blamed for the failure of the first round of "real" research interviews.

Academic presentations are therefore not only situations in which academics interact in particular ways in relation to various configurations of laptops, clickers, pointers, chairs, tables, screens, slides, images, clothing and audiences. Nor are they situations in which academics adapt the design of their presentations to modulate atmospheres to communicate and through this convince others of the validity of their scientific knowledges. Neither are academic presentations merely situations in which knowledge of the expectations of academics, students and universities are maintained. Academic presentations are the means through which academics self-present, communicate their expectations of the world around them and reflect on their presentation of their

knowledges and selves in response to others' feedback. In these situations, academics inevitably enrol other academics in this very same process and encourage their self-realisation as professionals through their own engagement with the academic knowledges that are presented. Academic presentations are therefore situations of academic self-realisation through which academics refine how they appear to each other and by way of this realise their expectations of how they are known in and of course beyond academia.

Afterword

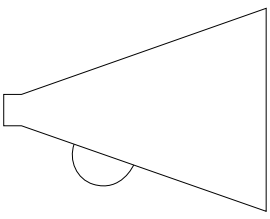
In this afterword I outline an important component of quasi-design through which I draw on the work of those "telling about society" beyond text (Becker 2007). During the period described in Chapter Six, the breaching experiments I attempted to undertake were resisted due to my failure to communicate my personae of quasi-designer. As I was seemingly considered a peer by the people taking part in my research, I now propose a way forward for quasi-design by yet again drawing on how we typically understand design. Specifically, quasi-design might involve considering how quasi-design – itself talking of academic presentation and self-presentation – self-presents as academic knowledge. Through this, I might hold together the future of the idea of quasi-design. To do this, I present my prior practice including the experiments undertaken in this research as the website of a design organisation called "be quasi". This organisation offers a training service by dispersing user-manual-style instructions on how to undertake experiments. I do this not only due to the participatory nature of the projects I have undertaken but in reference to Chapter One where organisations are described as made up of a multitude of scripts. Through this, I begin to consider how I *present* this project to *disseminate* the idea of quasi-design, mediate future *participation* in and *inform* how other academics might develop inventive modes of (self-) presentation. This means that the website also represents how I *self-present* as a quasi-design practitioner. This project therefore draws on a particular type of design – the design of self-help publications which appeared during the 1970s which, according to Micki McGee (2005: 76), help spur profitable techno-capitalist lifestyles during a time in which identity manifests as desire-led, as opposed to familiar project. Sam Binkley (2007: 5; 118) considers such publication-led "self-fashioning" as contributing to the "happy subject" for whom "a category of identity" provides a level of emotional wellbeing (2014: 17). On the one hand, I consider these instructions as a way of presenting a type of personal tutorial (vom Lehn 2016: 74) experiment for myself or other people to reflect on or realise new forms of sociality (Marres 2012: 79; Guggenheim et al. 2018: 69) in what might therefore be considered a self-experimental society (Gross and Krohn 2005). On the other hand, I consider them a return to Akrich's (1992) likening of scripts to instructions and Garfinkel's (2002: 199-200) understanding of them as "taking on a different and lively sense". These instructions may therefore take on a life of their own. Just as quasi-design might, in how we employ this idea, and what this says of our expectations of the world around us, too.



A.1: The website www.bequasi.com

Beyond Presentation
Explore old school presentations to appeal to different audiences.

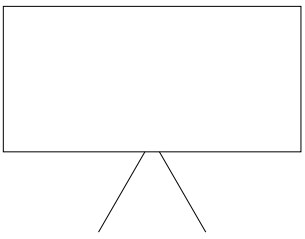
1. Write the names of different presentation technologies on pieces of paper such as:
    - White-board
    - Balthazar projector
    - Flip-chart
    - Megaphone
    - Book
    - Lectern
    - Nothing
    - Carousel projector
2. Fold the pieces of paper to conceal the presentation technologies.
3. Place the pieces of paper in an upturned hat or other container.
4. Shuffle the pieces of paper by shaking the container.
5. Select and unfold one piece of paper.
6. Conduct your next presentation using the selected technology.



A.2: *Beyond Presentation* on the website www.bequasi.com.

Picture Perfect
Look beyond bullet-points and pie charts when designing presentations.

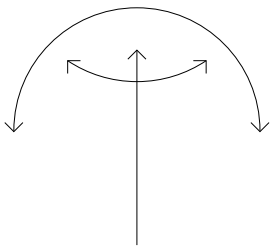
1. Create a slide presentation made up of five blank slides.
2. On each slide place one type of image such as:
    - Image reproductions of your favourite artworks.
    - Images from a children's picture book.
    - Five diagrams generated by your slideware software.
    - Frames from a comic book.
    - Desktop wallpaper images supplied with your computer.
    - Diagrams from a scientific journal or book publication.
    - Images generated using an online random image generator.
    - Emoticons.
3. Use these slides during your next presentation.



A.3: *Picture Perfect* on the website www.bequasi.com.

Preparing Presentations
Practise presentations and approach the unexpected with confidence.

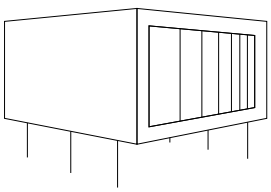
1. Ask a friend or colleague to provide you with a slide presentation.
2. Do not look at how long nor the subject or content of it.
3. Arrange a presentation in a suitable room.
4. Give the presentation for ten or more friends or colleagues.
5. Discuss your presentation performance with those present.



A.4: *Preparing Presentations* on the website www.bequasi.com.

Self-presentation
Dress to impress whilst giving poignant purposeful presentations.

1. Organise a rehearsal presentation with an audience.
2. Make sure there are two rooms available.
3. Prepare one room for the presentation.
4. Place a clothing rail in the second room.
5. On the rail put four clothing outfits influenced by:
    - Architects
    - Archaeologists
    - Nurses
    - Mountaineers
    - Scientists
    - Soldiers
    - Professors
    - Hippies
6. Welcome the audience and give your presentation.
7. Receive feedback from the audience.
8. Enter the changing room and change into one of the outfits.
9. Conduct your presentation and receive feedback again.
10. Repeat this process until all of the outfits have been worn.
11. Discuss the most suitable attire for your upcoming presentation.



A.5: *Self-Presentation* on the website www.bequasi.com.

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