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University of Sussex

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Submitted for the degree of Doctor of Philosophy

The Making of Postdigital Experiential Space

Punchdrunk Company 2011-2014

This thesis presents my original contribution to knowledge, a combination of critical media and performance theories to analyse the production and augmentation of postdigital experiential spaces in Punchdrunk Theatre Company. Distributed agency is key to Punchdrunk's work, with makers within the company and audiences both being active participants in meaning-making, across complex and detailed interfaces. In order to investigate the making cultures on 'both sides' of the interface, I undertook a two-year participant study as a researching designer within the company during the build of the productions *The House Where Winter Lives* and *The Drowned Man* in 2011-2014, gathering field data in the form of extensive interviews with members of the company and audience participants, supported by diary notations and photographs. I studied the processes and methods that extend, distribute and regulate agency to both audiences and makers within the company, and identified devices and features of the interaction design of the company that produce the immanent subject-event relationships that support immersion in their work.

A core aspect of this research concerns the relationship between immersion and the sublime, and how subject-event relationships (immanent vs. transcendent) contribute to engendering sublime interactive experiences. I have analysed the consequences of this for the modelling of participation in interaction design, and how it influences conditions of possibility within interactive systems across physical, digital and blended media. The conclusion of this research includes the definition of a postdigital sublime, and proposes a delinquent system aesthetic that integrates proxies for gravity through articulation of the 'shadow side' of interaction design.

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Punchdrunk Company 2011-2014

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Chapter 1: Introduction

The head is the organ of exchange, but the heart is the amorous organ of repetition (Deleuze, 2014: 2).

The research presented in this thesis identifies and analyses making cultures and audiences formed around Punchdrunk's immersive theatre productions and blended reality applications across physical and digital media. Their work is used as a vantage point for an exploration of key critical theories through close study of processes and production methods that extend, distribute, and regulate agency to makers within the company and participating audience members. The objective for these analyses was to identify alternatives to normative legacies in digital interaction design, particularly in regard of how participation and interaction, by both makers and audiences, is conceptualised and modelled.

My original contribution to knowledge is an analysis of how experiential space is generated and augmented on 'both sides' of Punchdrunk's interfaces, and the combination of critical theories from media and performance studies for analysing interaction and experience design. The resulting theoretical framework was used to analyse data gathered during ethnographic research undertaken within the company between 2010 and 2014, when I worked with Punchdrunk as a researching designer during the design and build of two productions. I worked on the build of *The House Where Winter Lives* (for young audiences) and *The Drowned Man – A Hollywood Fable*, which took place in the Old Sorting Offices at Paddington, London, and was the largest Punchdrunk production to date. I participated as an audience member in both the productions that I worked on, as well as in the production of *Sleep No More* in New York, which is devised around the same structure as *The Drowned Man*. I interviewed company members who contributed directly to the work, and audience members who attended *The Drowned Man*. It was crucial to the research to record the experience of Punchdrunk's work from the perspectives of both makers within the company and audience participants, who act as co-makers of meaning. Designed interactions were regarded as interpretative acts being "[...] enmeshed through and through in an organization of elements and forces which can be called a 'structure', a 'system', or an 'economy'" (Aherne, 1995: 25). I therefore undertook extensive interviews with live audience members about their experiences and responses. My live audience research was complemented by analysis of the social media fandom discourse that has formed around primarily *Sleep No More* and *The Drowned Man*.

Aherne's comment on de Certeau's theory associates structures, systems, and economies, and defines them as formed by organised elements and forces, enmeshed with interpretative acts (Aherne, 1995: 25). Seen in this light, interactive systems cannot be limited to digital materialities, and interaction design can be regarded as spanning the full spectrum of

physical and social materialities. Approaching interaction design as something that extends beyond the digital – as postdigital, even – offers an opportunity to form a critique that looks at how, in Berry’s words, culture happens to the digital (Berry, 2014a: 157). As a contribution to the postdigital discourse, this thesis considers interaction design in a historical perspective, as described in chapter five, to fold the expressions and technologies of immersion and the digital into the longer arc of experimental performance and participatory theatrical storytelling. Locating digitally mediated interaction design within its historical dependencies allows for analysis of what is specific to its materialities, i.e. the conditions of possibility that are imposed by the underlying logic of computational infrastructures, by way of comparisons of physical and digital interactive systems (in this instance, Punchdrunk productions). As a function of embedding interaction design in its historical perspective, we can better articulate and augment the influence of culture on the digital, and dislodge its aura of separateness, or transcendent neutrality, in relation to its human contexts of making and participation.

This position is supported by Parikka’s call for considering the “weird” materialities of the digital to include “signs, meanings, attractions, desires” as well as the “processual” (Parikka, 2012b: 97-99), as such matters are neither neutral nor independent of culture. Punchdrunk’s work was selected as a model for postdigital interaction design as their audiences are co-performers and active meaning-makers in the interactive systems produced by the company, and are thus regarded as essential ‘moving parts’ of the work. I use the term *articulation* to discuss the agency that is afforded makers and audience participants in Punchdrunk’s interaction design, combining its common meaning; clear and detailed expression through language, movement or a medium for making, with its secondary meaning; creating mobility by way of adjoining parts. In scripted environments such as theatre, dance and interaction design, language is a vehicle for agency. As makers within the company articulate the narrative (give detailed expression to materials within a system of enmeshed symbols and affordances), so do audiences in their experience of the productions, through embodied articulation of the narrative as it develops in space. The cognitive and embodied processes of company and audience participants that are used in the articulation of the narrative are therefore regarded here as material to interaction design. Makers, actors and audiences are joint agents with a shared responsibility for articulating and making the interaction work not just functionally, but in terms of generating experiential space and producing meaning. To support the analysis of these processes, de Certeau’s theory of story in relation to spatial operations acts as a central spoke for my research. Space, according to de Certeau, is an extensive function of close-range interaction – exploratory, emergent and dynamic, a practice and a performed expression: a process of making-space.

Based on the analyses in chapters six through to eight, I propose approaches to the conceptualisation of participation and interaction that can be transposed to digital design to

generate and maintain immanent conditions of possibility within interactive systems, where immanence represents emergent, situated encounters that create or extend experiential space. Punchdrunk's work can be differentiated from the dominant interaction design paradigm where personalisation is based on data harvesting, by using Deleuze's theory of difference and repetition and discourses drawing on this work, in particular the posthuman discourse. The idea of efficiency that is associated with the current interaction design paradigm is dependent on the formation of externalities, and is closely aligned with contemporary economic ideas of efficiency. Efficiency depending on the externalisation of complex costs has come to stand in for purity (of purpose) as a naturalised expression of 'good sense.' However, externalities, including those applied to interaction design, are not neutral. In the case of software systems, they are a vehicle for outsourcing much of processing (as 'costs') to system users or participants. While this approach reduces the resources required for in-system processing, it limits the range of contributions that interaction participants can bring to the designed environment, as well as their experience potential. The consideration of agency and the cognitive and embodied processes of participants as material to interaction design challenge a reductive understanding of efficiency, and presents new potential.

Punchdrunk's work is normally associated with the immersive genre of theatre and performance art. Immersive theatre is designed to envelop the audience not just physically, but also psychologically, creating conditions of possibility that engender close-range, embodied subject-event relationships. The association between immanence and immersion in theatre has been observed by Machon, and is, via Artaud's legacy, key to the development of Punchdrunk's aesthetic (Machon, 2013: 30, 38). Immersion, as an aesthetic response beyond being physically surrounded by images, sounds, and other representational forms, is described by Punchdrunk audiences in terms suggesting the willing abandonment of critical distance (AUD-F-03072014, AUD-M-11072014). The collapse of critical distance, according to Schechner's performance theory (Schechner, 2013: 80), is a characteristic of ritual, and a device associated with ritualistic experimental theatre. The immersive legacy of Artaud's *Theatre of Cruelty*, which reveals complicity by way of ritualistic enactment (Chow, 2012: 27), seeks to challenge bourgeois' representation by way of redrawing (rather than breaking) the fourth wall to incorporate or 'abduct' the audience (Chow, 2012: 41). In this study, Punchdrunk audiences, once 'entrapped' within the dark and disorienting performance space (fig. 8.1, section 8.2), performed a range of spatial tactics (fig. 8.2, section 8.2), suggesting the immersive performance space, or 'trap' (Chow, 2012: 43) as a site for convergence of de Certeau's concept of space and emergent behaviours with immanence and the limitations of the "dogmatic image of thought" (Deleuze, 2014: 209-210). Audience descriptions broadly conformed to the qualities associated by Lyotard with the failure of reason that defines the postmodern sublime: the secondary deprivation of "light, language" (Lyotard, 1991: 99) and "life" as a construct of reason and

associated identity constructs. The sublime, as will be outlined in section 1.2, is thus proposed as contributing to the immersive states described by Punchdrunk audiences.

Within the clockwork structure of Punchdrunk productions that frames the movements of performers and audiences (the ‘Punchdrunk formula’ that is described in chapter six), conditions of possibility are emergent and embodied on both sides of the interface: in the making as well as in audiences. The phenomenological perspective on embodiment, which bases its viewpoint on the irreducibility of lived experience, seeks to collapse the Cartesian dualism between mind and body and (Williams, 2001: 57), and emphasises the physicality of social and shared experience. This perspective forms a historical backdrop to the posthumanist arguments of Hayles (2002) and Braidotti (2013), who emphasise the interdependence between agents and their environment, and question the validity of identity constructs formed on the basis of the *Cogito*. For analytical purposes relevant to this thesis, the embodied mode of being in the world can be assessed by way of its style, context and the manner in which it unfolds in time, which places its expression alongside that of the ‘language games’ of linguistic philosophy (Williams, 2001: 57). Accepting Bogost’s proposition that interactive systems and participatory media are expressions of procedural rhetoric (Bogost, 2007), this perspective supports the approaches taken in chapters six to eight, which analyse the interactions by both company makers and audience participants with the performance space itself. The embodied perspective on participants in interactive systems also supports key propositions made in this thesis; that actions may be qualitatively analysed and articulated while preserving the anonymity of the agent or participant, and that the lived experience of system participants should be the focus of the interaction designer, rather than their ‘identity’, expressed in reductive demographic terms.

The interface, a product of emergence and structure in a balance that is always temporary, is part of a larger structure or system in the sense implied by Aherne in his analysis of de Certeau’s work. It comprises context, i.e. the local culture of the company, and the historical locus of the aesthetic within which the work of the company is normally regarded. The development of the immersive aesthetic can be located within experimental performance. In the era of cross-platform narratives and blended reality games, interface design draws on a history of transgressing the ‘fourth wall’ that separates the audience from the stage in traditional proscenium theatre. Rather than building on Brecht’s *Verfremdungseffekt*, it owes more to Artaud’s *Theatre of Cruelty*, which confronts audiences with compromised identity constructs through disorientation and sensory shocks. It thus lays bare the failure of representation via the sublime experience that results from being deprived of the rationality constructs that support subjective identity (Lyotard, 1991: 99). The ‘safe’ subject position of seated audiences is undermined by the dissolution of physical and narrative boundaries between stage and auditorium. Punchdrunk’s audiences are instead positioned within the work as participating

subjects, ambiguously boundaried in relation to other agencies. This offers an opportunity to investigate the posthuman condition in interactive systems, where the participating subject may both experience the extension of the boundaries of their agency and invite the incursions of other agencies via the affordances and conditions of possibility offered within the system. With this posthuman subject position in mind, audiences are here referred to as participants in, rather than users of, interactive systems. The term ‘participant’ is more indicative of agency than the term ‘user’ and is more appropriate for a discussion of postdigital interaction design that is based on the analyses in later chapters, which demonstrate the limitations of constructs that suggest set behaviours and outcomes. Punchdrunk audiences are regarded as active meaning-makers who take part without instructions or maps, and are encouraged to engage in emergent in-system behaviours in response to curiosity, e.g. following a performer or investigating the set. If an audience member chooses not to take an active meaning-making role during participation, the result will likely be failure, subjectively measured in reduced quality of experience. There is, however, no defined path to success, although increased engagement will lead to increased exposure to experience potential. This and other features makes the interaction design of the company relevant as a case study for interaction design more broadly, particularly as their work engenders extraordinary audience responses and prolonged commitment to the experience.

Punchdrunk’s work demonstrates how emergence can be accommodated within interfaces and managed within interactive systems, even when it does not present as aligned with the system narrative. Digital interactive systems generally present affordances that are both more narrowly defined and limited in number than physical interactive systems. Ambiguous user inputs remain challenging to process digitally, as computers do not match the human ability to interpret natural language, including gestures that are not entrained to affordances offered in digital interaction. Ambiguity, and the facility for differential interpretation it lends to language by way of metaphor and other figures of speech, remains a persistent challenge in natural language processing, and social media and computer game companies are in the early days of research for the implementation of automated moderation of user behaviours (Cheng, Danescu-Niculescu-Mizil and Leskovec, 2015; Nobata et al., 2016; Greenberg, 2017; Cross, 2017). Significant progress has been claimed in both natural language processing and ‘human-like’ AI, although actual success is difficult to establish, as ‘Wizard of Oz’ methodologies are often used, albeit ostensibly for prototyping (Huet, 2017).

In software engineering, efficiency is a measure of purity of purpose (Wardrip-Fruin, 2009: 17), which, in the context of human-computer interaction, thus tends towards the limitation and close entraining of human inputs. This suggests purity of purpose as a transcendent principle in a hierarchic perspective, and as such, according to Rancière, fostering ‘stultification’ (Rancière, 2009: 9-14). Rancière addresses participatory forms of performance

not simply in terms of physical, but interpretative participation (Rancière, 2009: 12-13). The didactic - or stultifying - approach to participation does not accommodate the notion that participants may legitimately interpret, and therefore act, within the situation in ways not intended by the author. By contrast, Punchdrunk's productions seek to accommodate what in de Certeau's terms might be called 'delinquency', to be understood as an expression of non-totalising agency. The delinquent story unsettles the maps (of ordered place) and fertilises the narrative space with the ambiguity of metaphor and the shadow play of 'old gods' or un-modern figures of imagination. Punchdrunk has developed specific methodologies to articulate delinquency within their interactive systems. The 'mirror choreography' of audience participants, who can only be indirectly directed, is supported and regulated by all aspects of the productions: the physical set and detail, lighting and sound, acting, and the Black Masks. Rather than being tightly controlled, the flow and pressure of the audience within the performance space is discussed within the company in terms that resemble fluid dynamics. Members of the company often participate as masked audience members, as well as Black Masks, to observe the audience flow during performances. These observations contribute, together with those of performers, to iterative adjustments during the production runs. The Black Masks, who act in place of front of house staff in Punchdrunk productions in a role that combines traditional duties with a unique function as mediating extensions of the set and performance space, play a key role in the analyses presented in this thesis, and have not previously been the focus of research. Their role sits between set and actors, and can be said to embody the quasi-object/subject of Latour, as discussed by Clarke (Clarke, 2008: 47-49) in his posthuman analysis of narrative systems. The manner in which the mirror choreography of the audience is supported and regulated by the Black Masks, as well as all other aspects of the production, is particularly relevant to interaction design, as it simultaneously produces and regulates emergent behaviours through narrative operations.

Considering audience participation as crucial to the completion of designed interactions (Wardrip-Fruin, 2009:11), and thinking about their participation as a mirror choreography, raises the question of how to conceptualise participants and participation within interactive systems, i.e. as agents, and the actions and agency of agents. This question, and how different approaches manifest different subject-event relationships, is key to this research. The analysis of subject-event relationships in interactive systems is undertaken against the background of Deleuze's Cartesian critique, de Certeau's theory of space and place, and their intersections with the posthuman discourse of Hayles and Braidotti. Emerging from this query is a critique of the designed role of agents within the material continuum of interaction design, taken to include participants:

I mean, you know, you set up an environment but that's nothing without the audience coming in, so suddenly you have to change so much, in terms of the space, and in terms

of where they go. But I think that's what brilliant about the team [...], their willingness to change and the willingness to setup a system and have it in place. But understanding that it will change, you know, on a day-to-day basis...an understanding that each element is as important as the others. It all combines as a whole. (COM-M-21072014)¹

The modelling and inclusion of audiences as active participants, material to the enactment and completion of interaction, places interaction design within the psychotechnics of cognitive capitalism (Parikka, 2012a: 73). In such an economy, participants, by virtue of being key to the interaction, may no longer be reduced to 'users' that are external to the system itself, and the dependency of the system on participants can be clearly articulated. Rancière's principle of equality in intelligence (Rancière, 2009: 16-17) can thus be applied, in a fashion that may at first seem perverse. Bringing participating audiences to the same level as the 'intelligent design' of the interactive system, which is the level at which software engineers approach their modelling, brings the question of how they are modelled to the fore. Regarding participants in this capacity, i.e. as crucial parts of the interaction, clarifies their role within the system as interpretative, with their ability to act on events according to their point of view, i.e. their agency, being a critical part of the design. In contrast to digital interaction design that is developed within the prevailing data economy paradigm, where participants are modelled as data objects, Punchdrunk, as will be discussed in chapter six, discuss their audiences terms of forces. This guides their approach to the 'mirror choreography' of the audience, which exhibits key non-totalising features, including immanent participant modelling. Immanent participant modelling is here to be understood as conceptualised 'from within' the interactive system, in proximity to and direct contact with live audience members who are encountered in their capacity as agents: emergent and unknowable outside of the specific situation. In this capacity, participating audiences act as emergent metaphors, performing spatial processes that involve calculations, additions, equations, and decisions, embodying the function of algorithms within the interactive system. The company has developed robust design methodologies to accommodate and support audience agency, based on conceiving of (and designing for) audience participants as individually undefinable, exemplifying a postidentitarian approach (Cull, 2012: 17).

The postidentitarian definition of participants-as-agents in interactive systems is contrasted with the transcendent perspective on audiences that is the dominant convention in digital interactive systems. There, personalisation is a key device for engendering engagement, and simultaneously a driver of development that serves predictive modelling. In predictive modelling, participants are represented according to reductive demographic characteristics, and future actions are predicted based on past (recorded) activity. Postidentitarian participant

¹ Interview citations indicate the type of interviewee, i.e. company or audience member, gender, and the date of the interview. Full transcripts of the interviews can be found on the attached USB memory.

modelling, as employed in Punchdrunk's design process, instead focuses on the dynamic properties of the participant in the moving present. Other non-totalising features of Punchdrunk's interaction design include indeterminate interaction outcomes and a commitment to inefficiency – or, rather, another kind of efficiency. Based on this, an alternative perspective on efficiency that draws on Deleuze's definitions of repetition and generality is proposed, where Deleuze's theory underpins an analysis of scalability that identifies the different conditions of possibility created by efficiency (or effectiveness) based on repetition, and efficiency based on generality.

1.1 *Sleep No More* and *The Drowned Man*

In short spaces of time, Punchdrunk builds large, physically and socially complex interactive structures for production runs that last 1-5 years, but which may occur years apart in different cities and countries. In the interim periods, they rely on the internal culture of the company, and its extension through the networks of its participants, for maintenance of the meta-narrative that allows the company to both recruit and promote their work on informal channels. Punchdrunk's larger theatre productions are structured as clockwork puzzles of exchanges between actors and set, requiring connection, processing and completion by audience participants, to form open-ended outcomes. The disassembled narrative is given dramatic and physical form by the design and choreography teams over three to four months of preparations, and the result is presented to the audience as a riddle in interactive dramatic form. While the recent productions *Sleep No More* (2011) and *The Drowned Man – A Hollywood Fable* (2013) were created to accommodate audiences of 400 and 600 per night, respectively, each also has a number of secret encounters designed for one audience member at a time. Punchdrunk explicitly state that they want every audience member to have a unique experience, even if this means that some will have disappointing and confusing ones. The structure of the Punchdrunk system ensures that there are too many scenes and interactions for any audience participant to experience in full, even during many visits, and individual audience participants are left with the responsibility for curating their own experience.

The filmic references, chiaroscuro lighting, physical scale, dynamics of space, explicit physicality and the almost obsessively detailed sets, into which much of the text is layered and embedded, are shared by the two productions above, as is the triple-loop narrative structure. The differences in the structure of the two texts are reflected in the choreography and the degree to which the narrative can be pulled together by one audience member. *Sleep No More*, based on Shakespeare's *Macbeth* woven through with elements from Hitchcock's *Vertigo* and *Rebecca*, only has one narrative layer and is, in comparison with *The Drowned Man*, more easily grasped. It pivots around two key areas: the ballroom in which a slow-motion banquet scene is enacted by the entire cast, and Lady Macbeth's bedroom. *The Drowned Man* is based on Büchner's

Woyzeck, a text that is already fragmented, with elements of West's *The Day of the Locusts* and Bradbury's *Something Wicked this Way Comes* (The-drowned-man.wikia.com, 2015). The story arc of *The Drowned Man* is further diffracted by the creation of mirror stories: each with similar themes but with reversed gender roles. The overarching narrative about the complicity with, and abuses of, power was realised in the form of a fictive film studio complex, Temple Studios. This framed and engulfed the smaller stories of love, hope, jealousy, insanity and self-destruction that were played out within films produced by Temple Studios and between the characters in the production. The boundaries between different layers of reality within the narrative were blurred, as were those between the narratives of the play and participating audience members. The main narrative strands in *Woyzeck* were reinterpreted, with the Hollywood film industry representing the army in the original text, and interpersonal stories reflecting the submission to, and participation in, distributed and often abusive power structures.

Punchdrunk's model for interactive theatre revolves around participatory principles and enactment of acentric, looping narratives formed on both sides of the interface. The performers work with fragmentary story loops that are played out in, and moving between, different parts of the building, sometimes simultaneously, and the audiences move around the set using browsing, searching and hunting strategies to compose their own version of the play. The physical sets constructed by Punchdrunk for the productions *Sleep No More* and *The Drowned Man* occupy several floors of large industrial buildings with, respectively, 100 and 170 fully realised installation rooms that are given a level of detail that is described by the company as cinematic. This level of detail, and the invitation to investigate, make the physical sets interfaces rather than conventional theatre sets. Audiences are free to roam the performance space, enter rooms, use furniture and prop items, open drawers, bags, and books in search of narrative elements, and receive sensory feedback from all material interaction. The sets are not just credible backdrops to the performances but integral parts of the productions; they form shared experiential spaces for both actors and audience participants.

The nature of the buildings found and used by the company inform the conception of the productions and the treatment of the texts they work with. The set design and the choreography are shaped and influenced by the infrastructure: "there's no show until there's a space, like there are ideas for shows, but there isn't a show until, and when we talk about it in time like, really, until there's a building" (COM-M-29072014). *The Drowned Man* opened 20 June 2013 in the Old Sorting Offices at Paddington Station in London, which at that point had been transformed into Temple Studios. Artistic Director Felix Barrett created an early production based on *Woyzeck* during his time as a drama student at University of Exeter, and Büchner's unfinished and fragmented text was one of many stories that the company has since maintained in a half-developed state, while waiting for opportunities to develop them. *The Drowned Man* was the most ambitious production by the company to date, covering 14,000m²

over four floors. The texts used for the production were encoded, “distilled” (COM-F-29072014) and embedded into the acting and set in symbolic form in visual and spatial themes, left as text fragments in books and scripts, scribbled on walls, and played out silently in series of letters, telling stories within stories.

The level of detail layered into the sets, described by audience members as supportive of their immersive state and driving their investment in the experience (AUD-F-03072014, AUD-M-11072014, AUD-M-01082014), allows for immense experience potential. Many features are deeply embedded and hidden from view, and may potentially never be discovered. In addition, the obscurity of both set (due to low lighting and the convoluted layout) and plot (through fragmentation) disguises the precision of the structure that sustains and supports the complexity of the productions. Darkness and the hidden are repeat themes in the work of the company, evident in the selection of texts as well as in their physical design and system narrative, where deep shadow is articulated and responsive. The Black Masks, hidden within the set, regulate the mirror choreography of the audience and respond to actions that overextend the licence given to participants, using methodologies that contain corrections within the narrative space and even augment the illusion and the experience (AUD-F-03072014, COM-M-27092014). The articulated and responsive shadow side of interaction in Punchdrunk’s work is pertinent to postdigital interaction design and experiential space. Efficiency constructs that pervade the software engineering field, which produces the infrastructures of interaction design, support a system narrative of almost puritanical modernism where categorisation generates dichotomies. Unwanted or unintended interaction is mostly left unarticulated or relegated to playworlds dedicated to it, in contrast with the physical world, where light and dark are inseparable. We see reflections of this in the popularity of computer games such as *Grand Theft Auto*, in which players enact extreme violence and antisocial behaviours, and in the shadow world of the dark web, existing as a mirror image outside the indexed world of search engines (Moore and Rid, 2016). This ‘shadow side’ however shares the infrastructure used by mainstream digital media: the dichotomy is a function of categorisation and its influence on what is articulated and not. The complexity and ambiguity of human participants in digital systems can thus be externalised through lack of articulation. A postdigital interaction design paradigm might challenge these dichotomies, articulate and harness differential participation, and simultaneously support a more robustly social digital environment.

1.2 Gravity and the sublime

The visual and voyeuristic elements of Punchdrunk’s interactive systems; the richness of the sets, the facility for ‘unseen’ observation offered by the masks worn by audience participants, and the often dark themes of their productions, presents a compelling, and in its sensory intensity almost lurid surface aesthetic that has often dominated discussions of their work. More

crucial to this analysis than the surface values of the design, however compelling, is the ever-present potential consequence of participation, including personal failure (AUD-F-03072014), shame (AUD-M-10072014, AUD-F-04072014, AUD-M-11072014), compassion, concern (AUD-M-11072014) and fear (AUD-F-03072014, AUD-M-11072014, COM-M-27092014). As a function of the blurred boundaries between participating agencies (AUD-F-03072014), participants reported on feeling responsibility not just for not failing or incurring shame: they also expressed responsibility for maintaining the suspension of illusion (AUD-M-10072014). Associated with these responsibilities, they also experienced a sense of gratitude and the desire to contribute (AUD-M-11072014, COM-M-27092014, COM-M-15092014).

The role of gravity in myth, and the evidence of its importance as a silent design partner in architecture, sculpture, and performance art, can be traced in the aesthetics of resistance to or embracing of the fundamental limitation of the human condition exerted by gravity. The Icarus myth is a cautionary tale of flying too close to the sun, and, in the joyful hubris of possibility, aspiring to a god-like position. Dissolution, breakage, failure and destruction follows, with no second life afforded the foolish. Drawing on de Certeau's analysis of space and place, resistance to gravity might instead be approached as a temporary stealth tactic within the place ordained to humans in the cosmos, and not undertaken under the assumption of neighbourliness with the sun god Apollo: an expression of space, not place. Rancière, drawing on Sloterdijk's *Sphären III*, discusses gravity in terms of the "weight of reality"; that which by way of difficulty or challenge brings meaning, and terms modernity 'anti-gravitational' in its aims (Rancière, 2009: 31). Gravity is embedded in our conceptions of ambition, desire, enthusiasm, failure, entropy, degradation and death, and forms a fundamental framework for the postmodern sublime as defined by Lyotard. The anti-gravitational focus on delight and modernist smoothness in surfaces, interactions, and functions that have dominated rationality constructs within both the software engineering field and UI/UX design have not adequately taken into account the attraction of the sublime. It is given ample expression in computer game design, where loss, vertigo, and disorientation are common aesthetic and narrative values, sometimes with exceptional results, e.g. *Everybody's Gone to the Rapture* (2016) by Chinese Room. In a fashion similar to *Punchdrunk*, Chinese Room work narrative into the infrastructure level, with both the player experience and the design process being informed by immanent perspectives. Outside of the world of gaming, the sublime aesthetic has been adopted by purveyors of content intended to induce fear, outrage, and mistrust of science, rationality, and associated points of view that underpin liberal humanist identity constructs, for strategic social media distribution, with both the design and the distribution of this content being guided by demographic profiling in a transcendent perspective (Benkle, Faris, Roberts, and Zuckerman, 2017; Cadwalladr, 2017). The sublime aesthetic has thus augmented partisan propaganda, exposing a limitation of social media platforms that has previously mainly affected individuals targeted by internet trolls: the

lack of immanent regulation of user activities in interactive systems designed according to the transcendent image of thought, simultaneously facilitating strategic exploitation and individual abuse. A more functional approach for the postdigital era, in which the digital is no longer shorthand for rational neutrality, may be to design for the sublime aesthetic, under conditions shaped to support immanent subject-event relationships.

Participants in live Punchdrunk productions negotiate the social contract within the performance environment on a moment-by-moment basis. They experience participation through their bodies and senses, and with this their weight; in colloquial terms, you might say that they ‘put their weight behind it’ and have ‘skin in the game’. With skin comes haptic connection, feeling and touch; with weight comes embodied consequences from actions taken within the situation. Even masked, the gravity of one’s presence is experienced as weighted through movement in space, and a gravitational space is a consequential one, in that one’s actions have material consequences. Meaning-making, whether it concerns matter or human expression, takes place in relation to gravity; the downward pull that limits the human condition and shapes the framework within which we understand our existence. The conditions of possibility offered within a Punchdrunk production generate participation on terms that are consequential: they occur in a gravity-bound space in which mistakes can be made, people can get hurt, and things can break. But in contrast with the world outside of the performance space, licence and agency is extended through anonymity, and not limited by explicit rules of engagement within an environment where normative expectations are seemingly suspended by extensive affordances, narrative acentricity and spatial and sensory disorientation. Essential here is the experience of being within a consequential space, where the impact of your actions is confirmed by objects behaving as can be expected in a gravitational environment, and where actions destructive to self or others, e.g. theft, irreversible destruction, or violation of the personal integrity of others, including performers, are met with immanent and situated responses.

The socially and sensorially ambiguous circumstances of Punchdrunk productions remove participants temporarily from ordinary reality and its constraints, while the moment-by-moment negotiation of social contracts calls for physical and cognitive efforts. Meaning-making is made possible only by active participation, thus articulating the fundamental premise of interaction: the efforts of the participant are essential to the completion of the process, whether made explicit, as in the case of Punchdrunk, or framed differently, e.g. as ‘invisible pay’ for service use, as in the case of participation that falls under the rubric of cognitive capitalism (Parikka, 2012a: 73). Effort, whether physical or cognitive, is a factor in all movement and form that is created or maintained against gravity. It requires energy and time, and is expressed through processes of thought, emotion, and physical actions. Audiences at Punchdrunk shows take note of the effort that has gone into the productions (AUD-F-03072014, AUD-M-

10072014, AUD-M-11072014, AUD-M-01082014), and specifically commit their own efforts and agency *in response to* the perceived evidence of invested effort and care; adding their own weight, time and embodied cognitive processes to the art-work.

Deleuze associates joy with the extension of agency through our composition with external bodies or events that we find agreeable with our nature (Deleuze, 1970: 28). A consideration of whether this takes place in space or in place is relevant to the question of gravity and consequences. While place may carry with it consequences of a primarily social or abstract nature that are regulated by convention and have predictable, ritualised or scripted consequences, space correlates more immediately with gravitational force acting on our bodies at close range, carrying within it the potential for catastrophe. Socially, this is correlated with the emergency of love and breakdown (falling-in/falling-out): fundamentally unpredictable and emergent. Physical emergency is associated with life and death, and evokes the sublime in both dimensions. The relevance of this to digital interaction is evident in the virtual representation of mediated agency: without gravity, the physical experience of the weight of consequence is absent, seemingly diminishing the importance of our actions. Without immanent social consequences, actions may seem inconsequential. Weight brings to our sensory awareness the possibility of falling, failing and catastrophe, and is fundamental also to the embodied realisation of complicity. Consequential participation on digital platforms thus depends on proxies for gravity: breakage, failure, pain, and loss; and perhaps also on the potential for digitally mediated actions and agencies to transgress and impose on the gravitational world. Without this, a postdigital sublime cannot be, if it is understood as the secondary privation of the soul (Lyotard, 1991: 99) that is dependent on the threat of the consequences of gravity (impact, falling, decline, and entropy).

An example of this can be found in the NESTA/EPSRC-funded collaboration between Punchdrunk, MIT in Boston, and researchers from the University of the West of England, Bristol, the University of Dundee and the University of Central Lancashire on a digitally augmented version of *Sleep No More* (in Chelsea, New York) in 2012. The academic report of the MIT collaboration positions the project within the broader research moment that seeks to rematerialise the virtual (Dixon, Rogers and Eggleston, 2012: 8). The team of researchers wanted to investigate the possibility for extending the experience of *Sleep No More* through the use of network-connected physiological sensors applied to a custom-made mask worn by the on-site participant in the live performance, and on-site networked portals offering means of communication between an on-site (live) and off-site (online) participant pair, mediated via operators delivering the online experience based on the information streamed from the participant in the live performance. The resulting report written by researchers at the universities of Durham and Bristol (Dixon, Rogers and Eggleston, 2012) discusses the failure (in comparison with the goals of the research) to extend the immersive experience beyond the

physical performance space, with the exception of a small number of off-site participants who worked in the UK time zone and hence were active in the small hours of night, and who found a degree of immersion in the ‘eeriness’ of the solitary nocturnal experience (Dixon, Rogers and Eggleston, 2012: 22).

The relative failure of the online experience of *Sleep No More* in the MIT project to match the experiences of in-system live Punchdrunk audiences was explained in the report as caused by the lack of ritual preparation, thus failing to engender playful and liminal states in online participants. Immersion was constructed as a state both liminal and playful, and a product of the right induction, rather than a function of the structure of the experience. As outlined in chapter two, the liminal, as an element of ritual, is characterised by Schechner as associated with efficiency (Schechner, 2013: 80) and has a potential for instrumentalisation. The researchers acknowledged the careful design required for the process of “putting someone in either a directed or playful mood and the personal freedom that is intrinsic to the experience” (Dixon, Rogers and Eggleston, 2012: 5), suggesting a conflicting conceptualisation of this design process, where the agency extended to the ‘user’, or participating audience member, is to be carefully controlled by the designer. The research team concluded in the academic report on the MIT collaboration that the key objective should be to “get the experience right, not the technology” (Dixon, Rogers and Eggleston, 2012: 6), and by this suggest recognition of the interdisciplinary nature of innovative experience design. However, as the main contribution of the research team was technology-related, the analysis focused on this part and fell short of a comprehensive analysis of the consequences of technological mediation. The report does not venture beyond Turner’s theory of liminality, instead suggesting that there is an arc from first learning about the experience to “forgetting about it” which, in the light of the audience research presented in this thesis, is an inappropriate criterion for judging the lack of immersion in the experience of the external online participants, compared with that of live audiences. The live participants taking part in the research undertaken for this thesis had not forgotten their experiences of *The Drowned Man* several months later, and online fandoms carry out their devotion for years. In fact, Punchdrunk’s asymmetric approach to publicity depends on their audiences remembering their shows and contributing to spreading the word about new productions, which can be several years apart. Upon analysis of the report, it seems that the disciplinary specialism of the researchers may, as they focused mostly on the technology itself, have resulted in the deprioritisation of the importance of the qualities of the experience itself (Dixon, Rogers and Eggleston, 2012: 5).

The research presented in this thesis proposes that immersion, as defined in the introduction of this chapter, is dependent on the sublime, and associated with an immanent subject-event relationship. The role that immanence plays in relation to the sublime experience as defined by Lyotard (Lyotard, 1991: 99), which is related to the presence of a perceived threat

within bounds, may in the MIT experiment have been compromised by the manner in which the in-system participant experience was mediated. The additional mediatic layers removed the possibility that the soul could be “deprived of the threat of being deprived of light, language, life” (Lyotard, 1991: 99) that lies at the core of the sublime experience for all but those who interacted with the operators alone at night, due to time zone restrictions (Dixon, Rogers and Eggleston, 2012: 22). Live Punchdrunk experiences engender the fear of failure in some audience members, as well as a range of social and sensorially triggered fears, but the digitally mediated experience in the MIT/Punchdrunk collaboration appeared to instead seek to *minimise* risk (including the risk of failure), and would render social and sensorially driven fears ‘safer’ due to the mediated presence of an external observer. In virtual and digitally presented experiences, where the influence of gravity is far removed, the perceived threat may need to draw on the possibility of consequences as proxies for gravity, or the dissolution of the constructed self, to generate a sublime experience.

1.3 Transcendence vs. immanence

The influence of the subject-event relationship in mediated forms of Punchdrunk’s work reveals its entanglement with, and effects on, the sublime experience. Examples of how the shift from an immanent to a transcendent subject-event relationship alters conditions of experience in respect of the sublime can be found in the scaled-up experience of the experiential space in the collaborative R&D study with MIT, and in the social media fandom discourses devoted to the work of the company.

Punchdrunk productions provide an environment within which the anonymity of audience participants is preserved through masking, disallowed speech, and the prohibited use of mobile phone technology, photography or other recording equipment. This anonymity, together with other disorienting and unsettling features of the experience, facilitates partial dissolution of quotidian identity during the performance. As will be discussed in chapter eight, disorientation and the challenge of quotidian identity constructs can contribute towards sublime experiences that are related to a posthuman potential for metamorphosis. The situation created by the experiment design in the MIT R&D study, which introduced data collection and a transcendent perspective on the participant, altered the conditions of possibility within the interactive system (Braidotti, 2013: 62). Digital mediation per se does not appear to have prevented immersive relationships between participants, as this was observed in unexpected loci where it was not characterised by a transcendent relationship, such as the one between the unseen external participant (the online ‘watcher’) and the source of data (the ‘watched’ in-system participant). The online participants generally failed to experience immersion in the activities of the live participant, indicating a negative correlation between transcendent subject positions and immersion. Instead of drawing on the intensity of the in-system experience, the

reported sense of immersion by some external online ‘watcher’ participants was a result of their connection with the (also external) operators delivering the online experience:

[The] experiment successfully created new connections between the online users and the performance, but not where it expected to. The strongest sense of connection for online users was with the operators delivering the online experience rather than directly with the live storyworld itself (Dixon, Rogers and Eggleston, 2012: 7).

Mediation on this occasion thus deprioritised the experience that was the initial object of study, and drew the focus of external participants to the mediated exchange itself, with an immanent plane of a kind developing on the platform provided by the technology. This suggests the importance of an immanent subject-event relationship for an immersive experience to occur: the transcendent subject position of the external ‘watcher’ in relation to the mediated in-system phenomena, and the activities of the in-system ‘watched’ participant, *prevented* their sense of connection to them, while their more immediate interaction with the operators referred to in the above citation sometimes did result in an experience of connectedness.

As a result of the observation that online participants connected more strongly with the operators delivering the online experience than with their in-system live co-participants, the researchers authoring the report somewhat surprisingly concluded that it was not the quality of the production itself that was the cause of the degree of immersion reported by a strong majority of live Punchdrunk audiences, and suggested instead that the performance itself was “merely a climax” of a longer arc:

The translation of these techniques to an online space requires an understanding of the effect and then the design and creation of appropriate process and techniques whereby an online audience is introduced to a liminal digital experience. Mapping the entire experience from when the audience first hear about it to when they forget it, and planning the entire thing at all these stages, is vitally important. The performance itself is merely a climax of the entire experience journey. However, in this project the online experience failed to deliver this user journey, losing the introductory and re-integration phases (Dixon, Rogers and Eggleston, 2012: 5).

While the meta-narrative of Punchdrunk and, by extension, their productions, is a part of the participant experience, the research presented in this thesis suggests that it is primarily responsible for attracting audiences to the production and for sustaining the fandom. It does not appear to contribute significantly to shaping the experience individuals have within the performance environment; this is influenced by the specific qualities of the environment and the events that unfold within it. Several interviewees reported that the rumour-based imperative to have a superlative experience caused initial resistance and suspicion (AUD-F-03072014, AUD-M-10072014, AUD-M-11072014, AUD-M-01082014): they were wary of the ‘hype’ and found themselves immersed in the experience *in spite of*, rather than thanks to, Punchdrunk’s reputation. Further indications of discipline-related bias can be found in the academic report on the project, particularly the conflation of perspectives on ‘shaping’ participant affect and encouraging participant agency in the design process (Dixon, Rogers and Eggleston, 2012: 5-6),

which suggested an exaggerated idea of how much it is possible (or desirable) to control the agency and experience of participants.

While controlling the conditions of possibility within the performance space through extreme focus on the detail of its making, Punchdrunk do not seek to control the narratives formed by their audiences beyond the fluid and indirect mirror choreography of flows and pressures. The ‘hype’ formed around Punchdrunk is in part maintained by their online fandom, who act as self-selected co-creators of the meta-narrative in ways that at times seems to be both at odds and symbiotic with the aesthetic created by the company. Of particular interest to this study is the persistence with which the online fandom seek to extract, map and archive that which Punchdrunk embed, obscure, and disassemble. This practice resembles the social sharing of gameplays, hacks and level descriptors that you can find online for computer games. The so-called ‘superfans’ of Punchdrunk participate multiple times; some visited *The Drowned Man* up to 100 times, and it is common to hear of those who go 10, 20 or 30 times. They form the core of the ‘Spoiler’ groups on Facebook, for which one of the key activities is to map everything they can find out about the show, including archives of fragrances used to amplify the atmosphere in particular parts of the set, one-to-one interactions, annotated choreography, complete character loops, and reproduced floor plans of the set. These archives are kept and shared online using collaborative software platforms, primarily blogging platforms, Facebook and Dropbox (thedustwitch.com, 2015; COM-M-21072014). This subset of the Punchdrunk audience simultaneously extends and seeks the solution of the mystery, and they are drawn to sense-making under challenging circumstances. The company is aware of their willingness to invest considerable effort and expense in pursuing, mapping and extending the meaning and influence of their object of worship:

That happened a lot, sort of six-seven weeks in: people knew the show. People would be writing essays and hints and tips on the internet, writing about what time to see this scene, and at some points they knew more than we did. In fact there were some bits the audience knew, like the one-on-ones, they’d describe it in intimate details, where we sort of knew the bare bones of it (COM-M-29072014).

Occasionally, the sense-making practice of ‘superfans’ go beyond mapping what is, and extends to generating narratives that, to company members directly involved with the design and build of the production, neither exist nor were intended to exist (COM-F-29072014).

In response to conditions of possibility offered by the social media platforms used (Facebook and, to some degree, Tumblr), much of the Punchdrunk fan discourse is formed around transcendent emotions and structures of thought. Mainstream social media platforms are prominent participants in the user behaviour data industry, with Facebook in particular operating as a direct competitor to Google (Gerlitz and Helmond, 2013). Considering the immanent conditions of possibility within the live productions, this shift to transcendent structures of thought on social media platforms seems counter-intuitive at first, but it may be

associated with the dream of “resurgence of the seemingly sovereign individual”, i.e. transcendent Man (Chun, 2011: 8), or a factor of digital mediation and the system narratives of Facebook and Tumblr. The discursive practice in Punchdrunk’s Facebook fandom frames their attendance at shows, participation in fandom activities, and procurement of objects associated with the productions in a manner that bears resemblance to cultic practices, including pilgrimage, sacrifice and ritual. Here, the knowing *mythopoeia* of metamodernism can serve as a speculative framework for analysis: a new enthusiasm that is permissive of informed naïvety and romantic expressions, characterised by oscillation between modernism and postmodernism (Turner, 2011) while refusing both. The simultaneity of diametrically opposing positions, e.g. the sincerity of modernism and the irony of postmodernism, is sought in oscillation: “attempting to attain some sort of transcendent position, *as if* such a thing were within our grasp” (Turner, 2015, original emphasis). Metamodernist theorists Vermeulen and van den Akker draw on Gramsci and declare a “pessimism of the intellect and an optimism of the will” to re-invent the Kantian transcendent as knowing make-believe (Vermeulen and van den Akker, 2015: 58, 65-66).

Members of the ‘Spoiler’ fandom excel in the production of labour-intensive demonstrations of their commitment, displaying on- and offline behaviours that are overtly generous and almost compulsively prosocial. Outright self-promotion receives poor engagement and is thus passively discouraged; those who seek recognition do so by making ‘offerings’ that are usually freely shared with the community. Such offerings take the form of hand- or custom made items that relate to the particular production the ‘Spoiler’ group is dedicated to, e.g. designed maps of the performance space, thematic foods, and meticulously collated and maintained lists of character loops or fragrances used in the production. In contrast with the communally oriented participation in the Facebook ‘Spoiler’ group, self-elevation is common in the Tumblr fandom through the creation of narratives, artwork and remediation of experiences that seem to demonstrate particular closeness to, or an especially keen understanding of the essence of the production that is celebrated. Commitment to the meta-narrative of the company can be traced in both the Facebook and Tumblr fandoms, although fans tend to select one production as ‘their’ storyworld that they henceforth consider superior to the others.

In Deleuzian terms, the commitment from Punchdrunk ‘superfans’ to the extension of their storyworlds beyond the performance space and time takes transcendent forms, albeit according to a metamodernist sensibility. Analysis of the company’s work show that the in-system ‘journeys’ of participating audience members, connecting points as relays of individual trajectories (Deleuze and Guattari, 2004: 419), in a sense *are* the performances; unique to every participant and complete as individual experiences. This view is corroborated by Barratt, who in interviews emphasises the role of the participant as director of their own movie (Jakob-Hoff, 2014) within a complex story structure that prevents repetition of the same series of events. The

self-identified superfans shift their focus towards a view of completion associated with accumulation of the ‘complete set’ and away from the concept of idiosyncratic completion as that which individual participants do through enactment. Analysis of the fandom discourse indicates that the drive to revisit the show multiple times is associated with a desire for closure, or a make-believe grand narrative. This is supported by the map-sharing, both actual maps of the space that are reconstructed in detail (examples of which can be seen in appendix 3), and of detailed descriptions of story loops that allow the visitor to know what happens where and when. The context for such sharing is the desire to maximise the experience through knowing all that can be learnt about it, suggesting a shift towards the Kantian sublime away from the sublime based on the privation of threat by Lyotard (Lyotard, 1991: 99).

On Tumblr there is evidence of self-assigned assumptions of a special status distinct from that of other audiences, which is less evident in the Facebook ‘Spoiler’ groups. On Facebook, elevation to special status is less prominent and only done *to* select members *by* other members: it is never directly self-assigned. In the ‘Spoiler’ Facebook community, overt attempts at self-promotion are passively frowned upon (in the form of a lack of engagement with posts of that nature). Analysis of the more communally oriented ‘Spoiler’ discourse on Facebook yields thematic registers associated with ritual and acts of worship. Some posts and comments refer openly to fan activities as religious or ritualistic in character, and many profess obsessive attachment to their chosen production. Here, attention to detail is a prominent feature that unites not just the company and their audiences, but also their online fandom. The recording and sharing of exquisite detail serves the important function of extending the boundaries of the storyworlds: as a narrative practice, it mediates between the superimposed ordinary and storyworld realities. The detail theme runs strongly through the threads about items bought from the set after the closing of the show, and how they were packaged and delivered. These posts, together with others made during the run of the production, fed into the ‘relics’ theme and combined the consistently broadest range of religious or worshipful behaviours associated with the ‘Spoilers’, overlapping with archival and mapping practices. Seeing the exposure sought by the superfans, who when visiting New York to see *Sleep No More* frequently discuss booking to go and see the show three nights running, this type of participation becomes an aspirational lifestyle; one that aspires to living in storyworlds.

Of the ‘Spoiler’ posts that directly refer to experiences of and in relation to the productions *The Drowned Man* and *Sleep No More*, 31.6% were thematically associated with ‘Ritual,’ i.e. prosocial practices evidencing commitment to the storyworld through embodied participation, or facilitation of the participation of others in social forms of celebration engendering *communitas*. 23.2% were associated with ‘Sacrifice’ and practices that demonstrated commitment to the storyworld and the storyworld fandom through creativity and giving, as well as extreme devotional effort, expense and surrender, including body

modifications (e.g. tattoos). Other effortful extensions of the storyworld made by members of the ‘Spoiler’ fandom are Cards Against Humanity cards with the text “Thanks to The Drowned Man, I learned to enjoy.....” and a virtual version of Temple Studios on Minecraft. Those who hand-make game boards and other items specifically crafted for the purpose of re-enactment and homage (see appendix 3) generally received the most responses. The 21.8% of posts coded to ‘Ephemerality’ reflected on profound longing and the sublime experience of finality and loss in relation to the storyworld, including intense and persistent preoccupations with fleeting sensory recollection and recreation of music and smells from the productions. 12.8% conformed to the category ‘Relics’ and described talismanic reinforcement of the storyworld through purchase, pilfering or collection of memorabilia. This group typically shared photographs and descriptions of their prized possessions, often displayed in the context of home reliquaries or altars. The smallest group was ‘Omen,’ which characterised 10.6% of posts referring directly to experiences of and beyond the two productions discussed in this thesis. This type of posts seemed to represent the most personally intense connection to the storyworld by way of perceived incursion of the storyworld into ‘real life’ in the form of signs, serendipitous symbols and persistent memory images over time.

Some fans run game nights on *The Drowned Man* themes where ‘Spoilers’ can meet and participate in games where they re-enact and extend the storyworld. References to such fan activities are often expressed in terms of worship, pilgrimage, and yielding to self-confessed extremes of devotion, often in a self-deprecating tone. That these practices are part of play behaviours is indicated by the often ironic tone in such comments; the ‘Spoiler’ discourse has an air of knowing poetic devotion to a subculture and is not at any point genuinely confusing the storyworld with real life, even in the case of posts describing omens. Devotion is demonstrated in sacrifices that participants are willing to make in their practice, with creative efforts under the themes identified by the group as particularly important and symbolic.

Nostalgia for a shared world that is no longer open to them dominates many of the posts after the show closed, with reminiscences, tips on resources where accounts of the show are collected, music playlists and ambient fragrances that remind them of being in Temple Studios. Wistfulness and flashbacks triggered by symbolic items seem to have attained a certain cache, as well as the willingness to follow leads to further experiences along the same lines – the closer the association to the original, the better. The associations to things or events in real life, rather than being expressions of delusion, seem to be those of aficionados who appear sensitised to perceived serendipities that remind them of ‘their’ production, including items that had a particular symbolism within the storyworld, e.g. horses or scissors. Many were preoccupied with the smells they remembered from the production, and traded tips on ambient perfumes that reminded them of particular parts of the performance, e.g. thunderstorms and earth. Threads providing guesses about fragrances worn by different characters, as well as the smell of specific

parts of the set, ran throughout the production and beyond a year after the end of the production. In addition to fragrance hunts being among the most popular category of fan activity on the Facebook ‘Spoiler’ fandom, the post gaining the most comments in response was a fragrance post.

Tumblr lends itself to writing longer posts, e.g. researched and compiled character loops, detailed descriptions of experiences during successive visits, and fan fiction such as artwork created in response to *The Drowned Man* or *Sleep No More* that are shared with the fandom via Facebook ‘Spoiler’ groups or reblogging. Tumblr fan blogs, while generally anonymous, also draw focus to the author, which lends such contributions a different tone compared to those in the Facebook ‘Spoiler’ groups. Some suggest a special status based on what they regard as an enhanced ability to participate in and interpret the productions in a correct fashion, and display signs of particular closeness to the company or its members as evidence of this status, e.g. *Back to Manderley*, “*Blood Will Have Blood, They Say*”, *Scrapbook*, and *Rotten Wood and Wilted Sunflowers*. Others take a more devotional approach, e.g. *All Good Things... All Bad Things...*, *Arfman*, *The Fool’s Loop*, and *Living Inside a Dream* (fig. A4.2). Comparing these activities with the pseudo-religious register emerging from discourse analysis of the Facebook fandom suggests that while Facebook prioritises communal forms of fan worship, Tumblr in some instances promotes self-proclaimed ‘sainthood’ or visionary practices that are more idiosyncratic, and with less focus on sociality. The Tumblr interface, in comparison with Facebook, lends itself to an authorial, hierarchic and idiosyncratic stance, but some of the ‘cast’ of superfans feature on both platforms, with the same individual contributing to the fandom according to the different affordances offered, and changing their authorial voice accordingly. The differing tone in the fandoms on Facebook and Tumblr, even when contributions are made by the same person, suggests a flexible response to the particulars of the interface or platform: a situated platform effect. Participants adopt different behaviours to suit affordances and the discursively formed tone that those affordances lend themselves to, but they change their mode of participation in adjacent circumstances, e.g. they might write a piece on Tumblr and then offer it to the community on another platform, e.g. Facebook. This fluidity in approach is also reflected in the non-confluent spatial tactics revealed by analysis of audience interviews (see chapter six), which highlights the influence of affordance design and participant modelling on the manner in which participation manifests. Extrapolating from this observation, data gathered about participants on any particular platform may have limited relevance, as they reflect local phenomena that do not necessarily persist across other platforms.

The performative element of social media participation can be regarded as a form of play in response to suggested roles. The online interaction between fans and the company manifests some antagonistic features, in that the activities of the fandom seemingly oppose the intentions of the company in seeking to map, record, appropriate and render transparent the

potential experience within the performance space. This antagonism appears as a form of play, conforming to the *agon* and *ludus* types of play defined by Caillois (Caillois, 1961: 14-16, 27) and as play rhetorics of power by Sutton-Smith (Sutton-Smith, 2001: 74). Seen in the play perspective, the structure of the live experience designed by the company more resembles the *paidia* and *mimicry* forms of play according to Caillois (Caillois, 1961: 27, 19-23), or the phantasmagoric rhetoric described by Sutton-Smith (Sutton-Smith, 2001: 151), which is confirmed in semi-structured live interviews with audience members (AUD-M-28062014, AUD-F-03072014, AUD-F-04072014, AUD-M-11072014) and observations of live audiences (COM-M-27092014, COM-M-21072014). The antagonistic play between the online fandom and the company's work appears to confirm the ambiguity of not just play and the boundaries between forms of play, but the ambiguity and changeability of participant behaviour in play, according to circumstances.

Pseudo-religious practices in the fandom emerge as forms of play. Both Facebook and Tumblr display metamodernist characteristics in their *mythopoesis* and pseudo-religious practices, with different aspects of this practice being observable on the two platforms. We should consider the possibility that the metamodernist sensibility of contemporary fandoms is formed under the influence of social media system narratives. The facilities for aspirational identity performance offered by social media platforms can be viewed in light of the posthuman metamorphic discourses of Hayles (Hayles, 1999; 2002) and Clarke (Clarke, 2008), but are simultaneously subject to the transcendent structures of the information architecture and monetisation models, as described by Braidotti (Braidotti, 2013: 62). Such conditions of possibility could produce the facilitation of a structure of feeling that oscillates between modernist and postmodernist sensibilities (Turner, 2011; 2015). The affordances for interaction that are offered on Facebook group pages enable the coordination of communal activities, in that the original post and the comments are visible on the same level. Thus, diverging from the tone in the community may present a more acute break with the social contract. In contrast, the relationship between Tumblr account 'hosts' and their commenters is more openly hierarchical, and the interface allows and encourages the account holder to present a more self-mythologising front. This may be related to the invocation of the sublime, which is subject to re-evaluation in the metamodernist pursuit of poetic romanticism. In a tradition building on Artaud's work, the live performances of Punchdrunk cultivate the sublime through disorientation of quotidian identity. For such sublime experiences to persist in the online fandom, their remediation by participants requires narrative operations to bring them into the plane of immanence that is supported. When a live experience is remediated on social media, a frame or layer is added that removes the sublime threat (as defined by Lyotard) a further step: sharing in-system experiences on social media thus necessitates the invocation or summoning of the threat of dissolution into the play zone. The weight given to ritualistic practices and storyworld omens in the Facebook

‘Spoiler’ group may thus be due to a summoning of the sublime: not an involuntary delusion, but a willing participation and suspension of disbelief for the purpose of inviting the storyworld into real life, invoking de Certeau’s delinquent old gods to perform a spatial operation and disrupt the quotidian order.

1.4 Research questions and thesis structure

The key research questions addressed in this thesis are:

- How are conditions of possibility within Punchdrunk’s interactive systems, in regard of how experiential space is generated and augmented, shaped by their infrastructure and the making cultures of the company and their audiences?
- How does the conceptualisation of participation and agency contribute to extending and regulating experiential space?
- How may the posthumanist perspective on participating audiences in interaction design inform and support a postdigital sublime?

The leading question for this research explores how the interaction design of Punchdrunk differs from contemporary digital interaction design on the level of making and infrastructure, and whether the factors producing this difference can be applied to digital interaction design. While the software engineering community does not expressly seek to create centralistic or governmental systems, a data-intense approach to interaction design in particular reproduces a totalising system narrative regardless of the intent of the designer/s (Galloway, 2004: 95, 114). There is, as discussed in the analysis of the collaborative R&D project with MIT, an interest within the software engineering field in learning from other disciplines. However, the discipline itself seems to reproduce totalising perspectives that stem from its internal discourse, conventions and methodologies. The influences bearing on these disciplinary conventions include those explored by media researchers such as Kittler, Silverstone, Couldry, Galloway, and Berry, and reflect a general tendency towards a transcendent structure of thought. Code as a material emerges from definitions of problems and their solutions that originate within the software engineering community, and conventions of code are formed in relation to dominant structures of thought within the community. It is, like other language practices and the representations of reality that they support, discursively formed, and even hypothesis-free approaches to machine learning, often discussed within the software engineering community as objective, reflect transcendent structures of thought. Phelan and Hayles discuss the power of the unseen or unacknowledged centre as the unmarked and the Cartesian liberal human, respectively, with Phelan observing the concentration of power around the presence of the unmarked, even as it occupies a disembodied position of transcendent rationality. This position, and the mythical subject occupying it, can justly be termed disembodied by virtue of its idealised form, and ideological via the conception of ‘pure’ reason in a hierarchical relationship

with the body and its affective states. The ‘pure’ machine reason believed to exist within the machine learning community may be designed to identify features for subsequent analysis from a hypothesis-free starting position, but the selection of samples, the coding of training data, the way training data are gathered, and the interpretation and implementation of pattern analysis, inevitably draw on the narrative systems within which such operations are performed.

Building on Deleuze’s Cartesian critique in his discussion of Artaud’s *Theatre of Cruelty*, de Certeau’s concept of dynamically extending space, and the posthuman discourse, this research looks at how participation in embodied meaning-making in Punchdrunk’s interactive theatre systems, by both makers and audiences, articulates immanent agency. The posthuman discourse defines a post-Cartesian subject that is ambiguously bounded and changeable, and moves away from the myth of the centre or, in the case of posthumanism, the transcendent liberal humanist individual. Immanence here signifies a relationship to the immediate environment that is emergent in nature, and which is focused on the detail of the interaction. As indicated by interviews with live audience members (discussed in chapter eight), participation is broadly described as exploratory, both cognitively and physically, in response to disorientating conditions of possibility. Interview accounts describe a sense of wonder or awe, as well as emergence, and sometimes even emergency (COM-M-15092014, COM-M-27092014, AUD-F-03072014, AUD-M-11072014).

In contrast, knowledge generation via analysis designed around the concept of stereotypes, by whatever methodology the data is gathered, will lean towards the static via the circular. Bound to the concept of place and stability, methodologies within software engineering for modelling participants in interaction design are founded on stereotypes (as discussed in more detail in the subsequent chapter), which are defined in relation to the unmarked or central myth as enacted within the discipline. This practice manifests the persistence of the transcendent image of thought, and is reflected in the pervasion of ‘personalised’ experience based on longitudinal tracking of participants and their online behaviours by commercial platform providers, including Google, Amazon, Facebook, Spotify and other participants in the data economy. The research presented in this thesis presents a critique of this approach, and suggests a shift in interaction design away from data-intensive demographic profiling towards modelling participants as postidentitarian and fundamentally changeable.

Interaction designers produce not only interactive systems, but also conditions of possibility that bring to bear a *coup* on the existing setting within which the system is implemented, as described by de Certeau in his discussion of how the spatial operations of stories modify the local order (Certeau, 1988: 85). In the physical world, an example can be found in Punchdrunk’s theatre in their reliance on the architecture of the urban landscape and the buildings within which they produce their work. Digital worlds likewise rely on existing infrastructure, and inherit digital material circumstances or ‘topographies’ that present specific

architectural or habitat characteristics. In the current digital design habitat, topographies that lend themselves to surveillance and reductive classification of not only actions, but also users or participants, prevail. The *coups* of interaction design within the contemporary digital order occur against the background of disciplinary heuristics and ideological topographies that are essentially centralistic, and the production of space or tactics in such circumstances bear many similarities with ancient narratives formed around quests, conquests, and frontier exploration (assumptions of empty or ‘virgin’ space). Such narratives often have at their heart a longing for a purity of purpose and an open horizon, embodying the transcendent perspective of the archetypal colonialist. This research aims to challenge the idea of audiences as territories to conquer, and identify territorial markers for different types of spaces within the digital topography: spaces that may sustain the essential complicity and fertile impurity of cultured sociality, contaminated by ambiguity and the long-worn and deeply layered wealth of experience that is carried into the interaction by its human participants on both sides of the interface. Pertinent to this is a discussion of subject positions and immanent vs. transcendent subject-relationships, and their influence on interaction design. Making this distinction means that we may be clearer on how we regard the participants in designed interactive systems, and how they are represented within digitally mediated interactive systems.

This query opens up space to discuss the role of delinquency in interactive systems, which is here approached according to de Certeau’s theory of space and place. Understood in the light of tactics, delinquency is interpreted as an expression of emergence, unaligned with the ‘good sense’ and order of place. Punchdrunk’s interaction design articulates this delinquency on many levels; the spatial semiotics, narrative structure, and the conditions of possibility created for participation. *The Drowned Man* at full capacity had 600 audience members freely roaming the largely darkened sets, and a cast of 35 acting out dispersed and fragmented scenes in a complex clockwork of interactions that require precise timings for crossings and meetings of different combinations of characters across 14,000m². Such conditions offer a vast range of challenges in terms of management of production and audience experience. The embedded spatial practices, or spatial operations, that have been developed by the company in support of and response to emergence are a key focus of this research, with a view to propose approaches to creating a similar responsive potential and resilience in digital interactive systems.

The next chapter of this thesis discusses the theoretical background against which this research is undertaken, followed by a literature review and an outline of the research methods and ethics. Chapter five discusses the development of the immersive aesthetic in a historical perspective, tracing its emergence from the Romantic modernism of symbolism through to the present via dada, futurism, surrealism and post-WWII experimental practices in performance art and theatre. Chapters six to eight present the case studies that form the core of this research, with analyses of interviews with company members and live audiences. Chapter six analyses the

story practices and spatial operations that simultaneously produce and regulate emergence within Punchdrunk's interactive systems from the perspective of de Certeau's theory of space and place. The discussion of de Certeau's theory of space and place in relation to transcendent and immanent subject-event relationships introduces the Cartesian critique that underpins the analyses following in subsequent chapters. Chapter seven investigates the embodied practices of making and devising that takes place within the company against the background of the posthuman discourse, with an analysis and discussion of thought structures manifesting in the work and the resulting interface, including the interactions taking place within it. Chapter eight discusses the responses of audience participants recorded in live interviews, and analyses their descriptions of experiences and actions while within the interactive environment of *The Drowned Man*, Punchdrunk's 2013-2014 production in central London.

The concluding chapter summarises the research outcomes and suggests directions for future research. It proposes tactics for the postdigital that facilitate and produce experience potential within interactive systems through a shift away from data intensity towards process intensity. In this proposal, anonymity, ambiguity and process intensity combine to produce conditions for greater response potential in interactive systems through enhanced articulation of the shadow side of interaction: a delinquent system aesthetic. Modelling and mediating participants as emergent stories in their own right, and integrating proxies for gravity, could shift the conditions of possibility within digital interactive systems towards a postdigital sublime.

Chapter 2: Theoretical background

The affective industries of the 21st century include the arts, entertainment and media industries and share, through reliance on distributed networks and related technologies, their technological infrastructure with the corporate world. Digitisation and reliance on the logistics of distribution and promotion enforced by search algorithms used to organise and prioritise online content have served to blur the boundaries between different types of content for interactive systems and experience platforms, e.g. online games, news, art and entertainment. The infrastructures that support effective distribution and data driven development of online content and growth of audience numbers simultaneously afford pervasive surveillance by corporate and government agencies. This positions actors in the arts and entertainment sectors within an environment where complicity is unavoidable. Contestation is synonymous with isolation, or limits them to short-range publicity infrastructures.

The largely unquestioned virtue and ‘good’ sense assigned to efficiency, defined by Lyotard as the performative principle of legitimation in late capitalism (Lyotard, 1984: 45-46) and articulated through remote metrics and data-driven development of digital systems, has gained a moral dimension and may as such be deemed transcendental. Here, Schechner’s theory of ritual as traditionally scripted and supporting the naturalisation of good or common sense (Schechner, 2013: 80) may be considered, as Couldry writes of ‘media rituals’ as participatory and patterned to support central myths (Couldry, 2012: 72). The ideological nature of the efficiency principle as a contemporary central myth that features in political and economical discourse as a proxy for moral purity is evidenced by its resistance to investigation, and it relies on the creation of externalities that cannot be fully accounted for. The posthuman and post-anthropocentric discourses, notably in the hands of Braidotti, challenges the exclusion of externalities such as climate change and unsustainable exploitation of natural resources, based on the impossibility of the separation of ‘Man’ and ‘Nature’ in an immanent perspective (Braidotti, 2013: 81-82), while suggesting that the trans-species relation between human and non-human can be creative rather than destructive. A postdigital system efficiency, if the concept of efficiency is to be reimagined for the postdigital condition in accord with posthumanism, cannot be based on reductionism and the exclusion of externalities. Silverstone recognises that the performativity of media in a social context “privileges action, meaning and the power of the symbolic” (Silverstone, 1999: 71), and highlights the tension between control and decentralisation. Media defines and maintains both the centres and the boundaries of perceived communities through mediated participation in the enactment of both core values and transgressive behaviour (Silverstone, 1999: 100-101). Mediated stories thus perform spatial operations, as described by de Certeau in his writings on space, place and the mediation of the

two conditions. The story, according to de Certeau, has the power to destabilise boundaries through the use of metaphor and transformative narrative elements that shift and disrupt frames for meaning-making: “What the maps cuts up, the story cuts across” (Certeau, 1988: 129). The spatially transformational story is an expression of *metis*; wisdom, cunning, or memory-dependent craft that gives the story maximum effect through the skilful application of metaphor, metonymy or synecdoche to layer frames for meaning-making (Certeau, 1988: 81-83). A postdigital efficiency that moves beyond the digital-modernist texture of feeling may, in addition to the posthuman discourse, look both to postmodernism and to the pre-humanist ‘delinquent’ old gods invoked by de Certeau in his discussion of *metis* and spatial operations. Such an efficiency might concern story and its potential for shifting frames and mediating transitions between place and space.

Metis, which in this context indicates story-expertise, depends on skill and understanding of the story material, with physically enacted and digitally mediated stories relying on detailed knowledge of the materialities of physical and digitally mediated participation. In the postdigital condition, participation in interactive systems can be regarded as inescapable, bringing the perspective in which the participant is viewed into sharp focus. For the purpose of interaction design, ‘users’ or participants in interactive systems are algorithmically modelled, with the computational mediation of participant performance on commercial platforms being designed to facilitate data collection to support the statistical description of participant behaviours. In a postdigital perspective, the ‘materiality’ of participants – or rather the manner in which they are modelled – cannot be regarded as external to interaction design. The question of exactly how the representation and mediation of participation in interactive systems occurs, and according to what principles, thus warrants close attention.

2.1 The digital and the postdigital

Participant modelling for interaction system design is traditionally based on categorisation of ‘users’ according to their demographic characteristics and past behaviours, forming user profiles, personas, stereotypes or archetypes (Kobsa, 2001; Galloway, 2004: 114). Relatively recent developments suggest alternative approaches to enhance inclusivity (Biswas, Robinson and Langdon, 2012), but a focus on categorisation, as opposed to specific qualities of interaction, will bring with it reduction of the resolution with which a participant is modelled for the purpose of optimising predictability. This creates a performative transcendent perspective in which the object of categorisation, in this instance the participant in an interactive system, is considered from a removed position that allows generalisation. Drawing on Phelan’s theory of the unmarked (Phelan, 1993), this removed position, invisible to the observed and ungraspable in the realm of digital networks by virtue of being distributed (Galloway, 2004: 31-33), is one of disproportionate power in relation to the ‘marked’ – or categorised – participant. The subject-

event relationship, considered as transcendent or immanent, and the associated tension between centralised and decentralised agency, will therefore be a recurring theme in this analysis of Punchdrunk's work as postdigital interactive systems.

In his discussion of Artaud, Deleuze states that clarity and distinctness form the logic of recognition, and that thought that is forced to think its central collapse must be engendered if it is to think into being that which does not yet exist. The dogmatic image of thought founded upon the *Cogito*, and upon which recognition and representation are formed, thus betrays thought (Deleuze, 2014: 203) and Deleuze suggests that difficulty is not "a de facto state of affairs, but *de jure* structure of thought" (Deleuze, 2014: 192-193). Deleuze critiques the Cartesian method as being limited to evaluating problems according to their 'solvability' in response to the dogmatic image (Deleuze, 2014: 209-210), revealing a propensity for self-reinforcing, performative representation of a problem or question. In the case of user modelling, this is exemplified by the representation of participants in interactive systems as data objects, including a data trail of past behaviours, for which a future is imagined based on the self-same dataset. In the context of the modernist-digital, and its fundamental belief in efficiency, user modelling is thus revealed as an essentially governmental practice, that, whether it is the intention of the system designer or not, will replicate totalising thought. Furthermore, the postdigital computal (Berry, 2014a, 2014b, 2014c) is characterised by its pervasiveness and potential for infringement on boundaries previously defining the personal and intimate, alongside the immanence of control and power relationships in the distributed networks described by Galloway (Galloway, 2004) that provide its infrastructure. Drawing on de Certeau's differentiation of place and space (Certeau, 1988: 117-118), this aligns the computal with the mediating story that transforms space into place with narratives that are spun ever closer to our intimate processes. The modernist-digital system narrative, with its governmental user story, thus entraps its participants ever closer, while seeking to gather more and more data to fit the trap more precisely to the trapped.

Stories, according to de Certeau, also do the reverse: they transform place into space. In the context of story-as-tactic, de Certeau revives the concept of *metis* from Ancient Greek myth to signify the combination of wisdom and adroit skill that, when manifesting as performed narrative, can undo and transform the order and stability of place into the more dynamic, emergent and extensive space (Certeau, 1988: 83-88). Story-*metis* draws on experience and memory, using metaphor to skilfully cut across that which has been defined and allocated its proper place, altering and expanding the possibilities for meaning. De Certeau's theory, applied to the media and media rituals that discursively form culture, demonstrates the power of stories as vehicles for meaning-making through definition of both centres and boundaries. The ability of story to navigate challenging territories with skill or *metis*, and to disturb or establish different kinds of order, is dependent on memory. This particularly concerns the cultural

embedded and historically moving memory that forms the basis of constructing and understanding metaphors in storytelling, and the subsequent inference of multiple, differential and perhaps contrasting meanings. Punchdrunk's theatre is a part of a historical tradition in which *metis* has traditionally been passed on and experienced through direct interaction, which prioritises immanent knowledge generation over formalised and generalised instruction and mediated interaction. This is reflected in how they conceptualise their audiences as material to the interaction: they are regarded as immanent to the work of the company, which allows for a different approach to generating knowledge about this 'moving part' of the work. Deleuze's definition of repetition as generative of difference and distinct from generality (Deleuze, 2014: 2-3) clarifies immanent knowledge generation and production of meaning, and distinguishes it from transcendent knowledge generation. The abstracted nature of code, and the hiddenness of its discipline, both suggests transcendence and invokes its consideration in the light of Phelan's normative unmarked (Phelan, 1993). A postdigital understanding of *metis* for the purpose of explores the space and place of computation cannot rely on that which is visible or tangible, i.e. not on attempts at direct representation, but rather principles of organisation that make is possible to shift frames – affording the play of meaning that negotiates and produces systemic contradictions (Galloway, 2012: 29).

Through the distribution of networked computation and its integration with the social, the technological environment in which we discuss the postdigital condition lends itself to instrumentalised liminality. Devices and media spaces which are experienced as informal and personal bring corporate agents into close contact with the most intimate details of our lives via distributed networks, and social media platforms shift the frame of the personal (Meyrowitz, 1985: 51). Interaction occurs in a mediated zone where participants act as-if on different terms. The mediated quotidian, with its social, navigatory, browsing, shopping and leisure activities, is enacted on casual and presumed-immanent terms, while the marketing and data economy that underpins the monetisation of the platforms on which the interaction operates on calculated and unseen-transcendent terms. According to a Cisco Systems study from 2012, the machine-to-machine communication that automatically records our online activities is the second leading source of increasing internet traffic after mobile data (Deuze, 2012: 131). From the side of platform and interface providers, then, users of these platforms are regarded in a perspective dominated by the desire to formulate generalities, while the user participates on personal terms. While this instrumentalised liminality serves the data economy, the instability inherent to liminality may be underestimated. As observed in the discussion of mediated Punchdrunk audiences in the Facebook and Tumblr fandoms in the previous chapter, changes in the fan discourses as they move between platforms suggest that the system narratives of the platforms on which interaction occurs transiently influence the nature of the interaction. The platform

effect, as well as its transience, thus compromise knowledge generated through these interfaces, unless it is regarded as local.

With user interfaces moving toward increasing capacity for gathering data about system users, the always-connected state of being that is symptomatic of the postdigital calls for a critique of how user/participants, and their activities, are represented on a system level. Tactics to counter the governmentality described by Berry (2014a: 39) and Galloway (2004) are relevant in order to limit its totalising influence, and to accommodate difference as performative differential. Tethered to this argument is the above critique of knowledge generated through self-reinforcing questioning. Galloway suggests irrationality as a form of active resistance to the totalising control structures of distributed network computation, disturbing the generation of predictive data modelling through a forced input differential (Galloway, 2004: 114-115). Drawing a line from irrationality as resistance to the social phenomenon of ritual in the context of control suggests an approach both ancient and new: foolery and storytelling. The theories of de Certeau and Bakhtin, both discussing what de Certeau terms the ‘delinquency’ of old gods, articulate an counter-efficiency, or alternative efficiency of stories that ‘cut across the map’ of space and place (Certeau, 1988: 129-130), shifting the narrative dynamic of ritual toward that of performance. The tension between ritual and performance is, according to Schechner, better described as the tension between *efficacy* and *entertainment* (Schechner, 2013: 80). Schechner considers ritual, in comparison with performance, as more result-oriented and characterised by a participating audience that is non-critical and believing or in trance states, in situations that are directed by traditional and communally oriented behaviours. The transformational potential of rituals is associated with the dynamics of their format and the collapse of critical distance, which allows participants to perceive the situation as transcendental as they connect ‘beyond’ the present time and place. In contrast, Schechner argues that the purpose of performance is entertainment, and so it does not require the collapse of critical distance. Performance can be shaped by traditional or new scripts, and may contribute to an enhanced awareness of historical time by addressing and commenting on tradition rather than enacting it (Schechner, 2013: 80) – and may also enact its questioning.

While this model was formulated for the analysis of performance art, several elements suggest that it can be applied to the postdigital condition. We find a similar temporality in both, with the collapsed timeline of the digital and eternal present of the life streams of the postdigital (Berry, 2011: 147-148); the casual, personal and ad-hoc tone in social media voices; the collapse of critical distance sought by corporate operators in social media; the enactment of procedural rhetoric that occurs during interaction (Bogost, 2007: 43); the user-generated content of crowds and communities and the scripted rigidity of interaction designed to eliminate ambiguity. The results in the instance of the postdigital are usually not formally spiritual, although *communitas* - the uplifting experience of ‘feeling as one’ (Schechner, 2013: 70) - can

occur as a consequence of ritualistic media participation. Ritual, being “traditionally scripted” (Schechner, 2013: 80), is part of an ideological construct (religion or class being prime examples) and the *communitas* encouraged by ritual can be a powerful and motivating experience regardless of whether it is spiritual or not. In a postdigital context, the primary efficient results of ritual are the reinforcement and naturalisation of these ideological constructs, including the myth of the centre as mediated governmentality (Berry, 2014a: 39). With designed media participation being fundamentally ritualistic by virtue of being patterned (Couldry, 2012: 72), the question turns to the structure of thought and definition of efficiency that informs the ritual script.

Drawing on Enzenberger, Galloway extracts characteristics of the dichotomy of “repressive” vs. “emancipatory” use of media that in a historical context represents centralised (modern) media and decentralised (postmodern) media (Galloway, 2004: 58). Repressive media use is, according to this model, associated with a centrally controlled, depoliticising program, produced by specialists and distributed to a passive-receptive audience with little or no influence on an individual level. Emancipatory media, on the other hand, is associated with an interactive audience, decentralised and collective production, self-organising social control and a “political learning process” (Galloway, 2007: 57). Arguably, the modes of behaviour described by Schechner as ritualistic partially correlate and partly contrast with Enzenberger’s optimistic (Galloway, 2004: 58) description of internet technology. The mobilised and collectively productive audiences reflect Schechner’s participatory and collectively creative ritual audiences, while the “political learning process” could map to the potential for “transformation of self” specified by Schechner as belonging to the ritual, and the collective creativity of Enzenberger’s emancipatory media user reflects the reduced emphasis of virtuosity assigned to ritualistic participation as defined by Schechner. However, absent in Enzenberger’s vision for emancipatory media use is the distinction between a “believing” and a critically aware audience that Schechner identifies as an essential difference between ritual and performance (Schechner, 2013: 80). The question of critical distance has been prominent in experimental theatre throughout the 20th century; from Brecht’s work *Verfremdungseffekt* and the disassociating theatrical devices in Artaud’s *Theatre of Cruelty*, which formalised the challenge of representation via the breaking of the fourth wall and the failure of reason.

The enmeshing of networked computational technology with everyday life in the postdigital condition facilitates, by way of its hiddenness, enacted representation through participation in media rituals, patterned according to the monetisation models of platform providers. The critique of such representation can draw on historical precedents from other participatory forms of expression, notably theatre and performance art. In performance theory, a framework for a critique of representation is well established, as are methodologies for bringing the awareness of participants from the ritualistic, and according to Schechner, uncritical position

to the more knowing one of participatory audiences in a performance. Galloway calls this process demystification, or denaturalisation (Galloway, 2004: 99), which includes recognition that that which is enjoyed is artifice. Metamodernism could serve as an emerging framework for articulation of the oscillation between critical distance and immersion in artifice (Vermeulen and van den Akker, 2015; Turner, 2015), and may even, as a philosophical movement, have developed in response to the social media environment. While metamodernism finds relevance as a framework for describing the structure of feeling that pervades contemporary fandoms and blended reality games and captures the focus on story in the formation of cultural narratives, it was heralded by de Certeau in his theory of space and place. The renewed interest in the sublime experience through the invocation of transgressive storyworlds suggests that de Certeau's delinquent 'old gods' are at play in the metamodernist structure of feeling, and that they are resurfacing in postdigital conditions of possibility. The "always-on" of postdigital connectedness suggests a play that never ends, a game that never sleeps, and an audience that is habituated to forget the boundary between stage and auditorium, ignoring the existence of a 'backstage'. The pervasion of the social by distributed network computation makes the opting out of participation on such platforms problematic, and, as the metamodernist 'new enthusiasm' proposes, a tactic in response to this challenge could be the oscillation between cynicism and immersion.

A critique of representation in theatre allows us to draw on a historically longer tradition, and addresses the asymmetry of power that characterises participation in governmental *communitas*. The development of the immersive aesthetic that is outlined in chapter five traces the challenge of representation in performance art from Romantic modernism to contemporary participatory performance art. This particular history starts with symbolist expressions of an internal world unaligned with bourgeois values that was formed of the "signs, meanings, attractions, desires" included by Parikka in the digital material continuum, and is followed by Artaud's attack on the transcendent self-representation of the bourgeoisie in *Theatre of Cruelty*, and the participatory 'artificial hells' of the surrealists. This existing critique open up a rich experiential and theoretical background against which to consider a critical development of postdigital spaces and forms of representation. The mundane liminality created by the pervasion of everyday life by computational narratives is already utilised as a performance space by the many performers of identity on social media, but the discourse of representation on the infrastructure level remains in a transcendent-modernist stage of development. As the field and culture of software engineering supplies much of communication and service infrastructure, its opening to the broader societal and cultural discourse is essential for a meaningful critique of the system narratives of the infrastructure level of interaction design; in particular their expression of subject-event relationships.

Drawing on Foucault, Parikka writes of the body that we think through it, and are inscribed and governed through it: it is a site of both agency and control, and already “deeply mediatic” in its capacity for perception and sensation (Parikka, 2012a: 22). He regards the intermedial field as one “in which the human body is trained as part of the modernization process” (Parikka, 2012a: 27), suggesting the inclusion of the embodied audience in the materialities considered for interaction design, and the necessity of challenging the way participation is modelled for the design of interactive system. With in-system actors (digital or human) already imagined as stereotypes by the builders of interactive systems, a postdigital challenge of representation within system narratives is overdue. Couldry, in his discussion of the myth of the centre, draws our attention to the formation of the mediated social and the structure of thought within the mediated social. Media rituals and the representations they sustain through mediated enactment are formative of the social understanding of ‘what is’ (Couldry, 2012: 75). Within this argument waits the challenge of representation via a critique of the transcendent normative.

2.2 Space, place and ambiguity: system narratives

This thesis explores the question of space and place in an analysis of system narrative and the tension between dynamic emergence and its regulation. Deleuze and Guattari suggest that the distributed influence of organisations of power knits together the formalisation of content and expression (Deleuze and Guattari, 2004: 76). This form of control remains hidden within systems due to the way systems are coupled to the “environments they distinguish themselves from to arise as systems” (Clarke, 2008: 13). The research presented in this thesis applies analyses of narrative, medium specificity and system aesthetics to investigate and track the formative dynamics of interaction design across the physical and digital materialities of Punchdrunk’s interaction design, in and out of the “blind spots” caused by the particulars of each medium (Clarke, 2008: 24).

The articulation of subject-event relationships within shifting frames is made more evasive of study by the indistinct nature of its locale, even though system participants enter into interaction from a position of their own materiality. From a position of situational and media analysis, Meyrowitz proposes that electronic media have changed the social landscape through altering the relationship between physical and social place, and introduces the situation as a *place* defined by activities, a point in time, and specific participants; a definition of particular relevance to the peculiar site of interactions within systems:

Situations are usually defined in terms of behaviours in physical locations. Goffman, for example, describes a behavioural region as “any place that is bounded to some degree by barriers of perception.” Roger Barker sees “behaviour settings” as “bounded, physical-temporal locales.” Lawrence Pervin defines a situation as “a specific place, in

most cases involving specific people, a specific time and specific activities.”
(Meyrowitz, 1985: 35)

Electronic media has collapsed time and space, and thus physical barriers, as “communication variables” (Meyrowitz, 1985: 13), effecting a near-complete disassociation of physical place and social “place” (Meyrowitz, 1985: 115). Meyrowitz emphasises the pervasive nature of “electronic messages” (Meyrowitz, 1985: 117) that by virtue of the fluidity of the medium enter and leave physical places unrestrained by walls and doors. He argues that this boundary-crossing, narrative space of electronic stories and communication alters social hierarchies and situation-specific formal behaviours that were previously in part maintained by physical distance or specificity (Meyrowitz, 1985: 125). Social behaviours that were previously characterised by degrees of isolation (e.g. the domestic sphere, prisons, and convents) have been particularly influenced by the dilution of importance given to physical places, and this “opening of closed situations” (Meyrowitz, 1985: 308) is a reversal of a tendency lasting several hundred years to subdivide and categorise social places.

The effects of the ‘opening of closed situations’ and the shifting boundaries and locales of the postdigital reinforces the call for a more detailed understanding of the structure of designed interaction, particularly as so much of the interactive narrative or procedural rhetoric (Bogost, 2007: 1-64) is carried by the structure of interaction itself and the back-end parsing of actions:

[...] it is of great importance for interactive media and new representational technologies [...] to understand the learning patterns that are instantiated when reacting to, and interpreting, incoming information from ubiquitous user interfaces that bring together cognition, reaction and action in narrative trajectories without explicit language-based representations (Bruni and Baceviciute, 2014: 368).

The dynamic instability of de Certeau’s narrative space, as compared to the fixity of place (Certeau, 1988: 118) suggests a tension between the formation and the challenge of what is perceived as reality and identity, with metaphor acting as a “delinquent” mediating vehicle between the two (Certeau, 1988: 129-130). Couldry highlights the role of categories in reality work as a nested or layered process:

[...] media constructions of ‘reality’ work in the social through the embedding in practice of specific organizing *categories*, a process which needs to be traced in multiple domains (Couldry, 2012: 135).

In practice, mediated categorisation is a form of discursive reality formation, reinforced through participation and remediation, including and perhaps especially influentially the categorisation that works out of view, in the back end of the systems with which we interact. The hiddenness of this discourse is contrasted by the promotion of visibility that we see on social media, where user-generated content based on personal experience drives exposure. From Phelan’s critique of visibility and the formation of minority categories as a form of false power, it follows that

demographic profiling of system users does not empower. Power, according to Phelan, is held within the unmarked, with the recognition as other than the unmarked being inherently unsatisfactory, and formative of the emergence of identity in relation to failure:

Identity emerges in the failure of the body to express being fully and failure of the signifier to convey meaning exactly. Identity is perceptible only through a relation to an other – which is to say, it is a form of both resisting and claiming the other, declaring the boundary where the self diverges from and merges with the other. In that declaration of identity and identification, there is always loss, the loss of not-being the other and yet remaining dependent on that other for self-seeing, self-being (Phelan, 1993: 13).

Phelan provides a perspective on the tension between definition and ambiguity in relation to the reinforcement of what, and who, is closest to the normative and thus less defined through failure by identifying the false premise of visibility-as-empowerment (Phelan, 1993: 10). According to Phelan, power is concentrated around the unmarked normative that does not need to be defined by qualifying information, labels or prefixes. The normative subjective position needs no qualifiers, while the Other must be defined by them in order to gain visibility. This visibility always occurs in relation to the transcendent perspective of the normative, thus objectifying the visible. Phelan's unmarked gives a label to the hidden established norm, and serves well as a proxy for the hidden power structures that are reflected in categorisation, and the systems and systematic processes that build on categorisation, including distributed digital network technology and its monetisation via the data economy.

Bowker and Star explore the ramifications of classification and standards in society and culture (Bowker and Star, 2000: 24-25): the centrality of its role in bureaucracy, maintenance of the state, healthcare, information technology and the dimensions of society upon which these systems impact. Against the background of Foucault's theory, they argue that the properties underlying classification choices inform "social and moral order" (Bowker and Star, 2000: 5) when applied to systems fundamental to the running processes of society. Positioned alongside Galloway's investigation of control within decentralised networks and Couldry's work on social form and social order as dependent on categories of thought (Couldry, 2012: 60), Bowker and Star adds observations about the profound ramifications of how and what is classified, categorised and ordered for the purpose of processing within systems. Both the centre and the external boundaries of the influence of the unmarked, applied to almost indefinitely scalable digital systems via categorisation, are obscure. Bogost recognises the expressive potential of systems and processes when he states "processes that might appear unexpressive, devoid of symbol manipulation, may actually found expression of a higher order. For example, bureaucracy constrains behaviour in a way that invokes political, social, and cultural values" (Bogost, 2007: 5). From Bogost's perspective on the procedural rhetoric of interactive systems, this expressive potential is embedded within systems, as actions and actors are categorised for interaction and interface design. Bowker and Star focus on the impact of categorisation within

systems, and the manner in which each categorisation valorises one perspective and silences another, view the processes they are part of as the “crafting of treaties” (Bowker and Star, 2000: 6-7). They emphasise the ethical and moral dimensions hidden in decisions regarding categories and standards for information systems, via compromises that may be acknowledged but nevertheless implemented and distributed within very large-scale systems (Bowker and Star, 2000: 25). Scaled within such systems, their influence is magnified and their impact extended across the reach of the networks that form the infrastructure.

As Bowker and Star state, complex projects involving a multitude of actors require standardised measurements: defined units, categories and standards (Bowker and Star, 2000: 13-14). On the question of standardisation as a totalising force, Galloway says:

The contradiction at the heart of protocol is that it has to standardize in order to liberate. It has to be fascistic and unilateral in order to be utopian. It contains [...] both the ability to imagine an unalienated social life and a window into the dystopian reality of that life (Galloway, 2004: 95).

Digital systems, like other systems, require categorisation to operate. But the proportional relationship between the decisions made for the functioning of such systems and the potential reach of such systems as they are implemented via distributed networks has few, if any, precedents. The decision-making processes underlying the categories that are embedded and layered within complex software systems occur on a micro-level, while the scaled results in some cases are global (e.g. Google’s algorithms for search results). As network technology is embedded within the social, so is encoded categorisation. Couldry points out the influence of learned differences, underpinned by categorisation, through enactment in media rituals and their subsequent naturalisation, along with the “seeming naturalness of the ritual action that enacts them” (Couldry, 2012: 74). Enactment and mediation together naturalise and extend the seeming relevance of such categories to the entire social field (Couldry, 2012: 75). Mediation of categories thus embeds them as dominant accounts of the world (Couldry, 2012: 84-85), defining the ‘place of things’ in what we collectively identify as society. Mediated naturalisation becomes a battle of what world view – and what set of categories – dominates: a battle to be won by the most pervasive weaver of myths.

The importance of Phelan’s exploration of the inverse relationship between visibility and power is highlighted by Bowker and Starr’s analysis of totalising categorisation in systems. Phelan’s work focuses on performance, made particularly relevant by the performative element of interactive media rituals as described by Couldry and Bogost. Visibility, in Phelan’s words, differentiates the marked from the unmarked, culturally dominant subject that does not need qualifiers, by virtue of being 1) male, 2) white, and 3) heterosexual. Marking, or othering, is integral to the perpetuation of normative hierarchies, and Phelan argues that the struggle for visibility by minorities has splintered opposition to and diverted attention from the hegemonic

unmarked (Phelan, 1993: 6-10). Making the case for disassociating visibility and power, Phelan says: “If representational visibility equals power, then almost-naked young white women should be running Western culture” (Phelan, 1993: 10). The qualifiers that mark the visibility and participation in public life of the non-white, non-male, non-heterosexual suggest that their marking is essential to signal that the interpretation of their expression requires awareness of a narrative specific to that category. Conversely, the interpretation of the expression of the unmarked does not warrant particular attention to the narrative specific to that group, with the effect of it being perceived as normative reality. Thus, for Phelan, definition or marking does not empower: it is the unmarked and naturalised nature of power that allows it to permeate society. This echoes de Certeau’s distinction of the extension of space from the fixity of defined place: that which is defined in fixed terms falls under the static and non-dynamic, while ambiguously delineated, non-restrictively defined agency can be more dynamically extensive. Participatory performance, through procedural enactment similar to that outlined by Bogost (Bogost, 2007: 4), often seeks to disrupt the order of place and generates forms of emergent ‘no-place’ or *ou-topia* in which the order of identity can also be destabilised. This ‘delinquency’ depends, according to de Certeau, on memory and metaphor for transformation and spatial operations, and enables the modification of local order by a *coup*:

Memory mediates spatial transformations [...] it produces a founding rupture or break. Its foreignness makes possible a transgression of the law of the place. Coming out of its bottomless and mobile secrets, a “*coup*” modifies the local order (Certeau, 1988: 85, original emphasis).

Here, de Certeau implies a disruptive or surprising use of memory that, in the context of storytelling, suggests the application of metaphor to create the possibility of multivalent interpretation and meaning-making. The *metis* of memory, in de Certeau’s words, *is* a space of sorts; a “moving nowhere” with “the subtlety of a cybernetic world” (Certeau, 1988: 88) that extends its polyvalent meaning-making to “places where powers are distributed”.

Narratives, which are dependent on memory for their creation and interpretation, connect place and space, and transform one into the other; they “organise the play of changing relationships between places and spaces” (Certeau, 1988: 118). According to de Certeau, they are examples of practiced space and/or spatial practice, unfoldings or extensions of space that negotiate a terrain composed of places. In the course of doing so, story-journeys can set or define places or, by virtue of *metis* and the memory cargo that metaphors carry, undo them. De Certeau describes the marking out of boundaries and the creation of “theatres of action” (Certeau, 88: 122-126), as founding. In this, he draws on the ancient Roman concept of *fas*, or “mystical foundation” (Certeau, 1988: 124), which was seen to be an essential precursor to an auspicious military or diplomatic campaign, called forth with ritual circumambulation in three distinct phases; one within, but near the frontier, of the Roman territory, a second that took

place on the actual frontier, and a third one outside the frontier and in the foreign territory the intended campaign was to take place in. The purpose of the *fas* ritual was to make space and provide a foundation for the intended action. De Certeau calls this the “theatre of actions” (Certeau, 1988: 125), and likens its ritual function, on a miniaturised scale, to the function of the space-making of the story, a “field that authorizes dangerous and contingent social action” – in other words actions that are intended to undo or alter existing social order. The skilful extension and negotiation that is embodied by the delivery of a story into a terrain that offers a range of place-orders (rather than topography) thus represents this founding in the context of narrative. De Certeau’s stories perform a certain kind of mediation, perhaps a delinquent form of mediation, by virtue of the *metis* of the Olympian gods that de Certeau poetically describes as not gone, but exiled and living on “in the most intimate of domestic habits [...] in our streets and in our apartments.” The story practice, or practiced stories, discussed by de Certeau emphasises ambiguity, transgression, and multivariancy, and the delinquency of space over the static order of place (Certeau, 1988: 129-130). Punchdrunk’s interactive systems, as experiential spaces that facilitate such expression, include and are open towards both the makers and audience participants. The structures of thought that inform and reproduce this practice, and the counter-totalising influence of *metis*, approached as a spatial practice that includes the meaning-making that is shared between company and audiences, is the focus of this thesis. The different materialities that come into interaction design may require specialist knowledge, but the story itself traverses the full range, and cuts across the map that delineates disciplinary territories.

2.3 Postdigital interactive rhetoric

Considering staging as a model of the changing subject-event relationship through modernity provides a framework against which we can analyse the presentation of media as it moves from framed and contained to transmedial and immersive. It also introduces theatrical devices that can be applied to laying bare ideological constructs and complicity, and allows us to formulate questions for the investigation of conditions of possibility in a mediated environment where the systems with which we interact tend towards the increasingly embedded and hidden. The analysis of the postdigital in terms of participation, and the narratives enacted or produced through participation, is relevant to the age of embedded, always-on computation. This holds whether the postdigital is considered an epoch in which ‘the digital’ is no longer containable or plausibly regarded as a phenomenon that is separable from its environment, or no longer inspiring a texture of feeling associated with modernism (revolutionary, disruptive, utopian). Having lost much of its utopian aura in the popular mythos, technology – and technocracy – is mistrusted in post-fact socio-political media discourse where tribal *communitas* supports challenged identities in place of progress narratives. For the postdigital condition, a critique of participatory rhetoric, which can be ritualistic/transcendent or playful/immanent, may serve to

enhance our understanding of some of these dynamics, as well as suggesting ways to negotiate the tension between narratives of continuity and disruption.

The immersive aesthetic in art articulates the complicity of participation in the call and response exchange of interactive procedural rhetoric (Bogost, 2007: 44). This can be applied beyond screenic interfaces: in his discussion of the interface effect, Galloway opens up the definition of interface to include the environment in which we move physically, with thresholds and openings presenting points “of transition between different mediatic layers within any nested system” and their codes (Galloway, 2012: 31-33). The postdigital condition, in part characterised by computation that is embedded into our daily environment, presents the case for analysis of the narratives that emerge through our interaction with such interfaces and the friction between their encoded layers. Galloway likens these narratives to play, which he regards as key to the mediation of this friction via our capacity for meaning-making:

Play is the thing that overcomes systemic contradiction but always via recourse to that special, ineffable thing that makes us most human. It is, as it were, *a melodrama of the rhizome* (Galloway, 2012: 29, original emphasis).

Galloway’s association of play with the rhizomic as the human faculty that allows us to overcome systemic contradiction points to the role of the minor within systems as one that both yields and distorts; tactics. Within the “special, ineffable” here referred to by Galloway lies the situated adaptive responses that emerge in contact with the interface and the challenges presented by the interface, whether they are topographical or narrative in nature. De Certeau’s theory of tactics, as spatial negotiations, articulates the emergent play of metaphor used with *metis* in spatially transformative stories within an environment that is structured according to transcendental strategies. Performance spaces designed to be disorientating can thus be said to present a trap or (according to Artaud) ‘cruel’ situation to audiences, and engender participation as emergent tactics.

Chow investigates the role of the senses in relation to mediatised reflexivity expressed as staging, and the process of reformulating representational place as a space for querying (Chow, 2012: 23-24). She questions the sensory austerity that must follow Brechtian alienation taken to its full expression. Drawing on Gell’s proposed general anthropology of art that reaches beyond Western art, Chow puts forth the possibility of action-centred art, where agency is distributed and the subject-event relationship in art is in focus as a function of “abduction” (Chow, 2012: 41). In doing so, Chow assigns art and agency transgressive potential in relation to the Western liberal humanist tradition: ‘art’ includes artefacts not intended as expressions of ‘high art’ and ‘agency’ is not restricted to human actors, but is “that which must be inferred or abducted” (Chow, 2012: 42). Building on Gell’s example, Chow proposes the artwork/artefact as a trap that captivates and entangles its audience and, through the audience participant’s embodied captivity, fulfils the intent of the trap’s design (Chow, 2012: 43). The articulation of

entrapment sheds light on the artefact/trap as “an index to a type of social interaction in which one party takes advantage of another by being temporally pre-emptive, by catching the other unawares” (Chow, 2012: 45). The experience of entrapment enforces rupture within the one who is entrapped and self-ensnared, caught between the impact of ensnarement and the fear of annihilation (Chow, 2012: 47). Here, Chow approaches Lyotard's definition of the sublime experience in art as a product of privation and threat.

Dramatic staging, as proposed by Laurel for a guiding principle for screen-based human-computer interaction (Laurel, 1991: 35) and developed by Chow for transmedial culture (Chow, 2012: 25), affects not only theatre and installation art in its different forms, but also the framing of possibilities offered by technologies for the presentation and interaction with media texts. Chow asks of transmedial erasure of distance and containment if it is making intellectual query impossible as it reintroduces illusionism, which appears to run counter to the mediatization of reflexivity through alienation or the Brechtian *Verfremdungseffekt*. In the discussion that follows this question, Chow traces the affinity between the stripping back of representational conventions through alienation and Artaud's theatre of cruelty, both of which employ “crudeness and primitiveness” (Chow, 2012: 28) albeit in different ways, to lay bare the mechanics of, and reach beyond, conventional representation. In the Brechtian tradition, this occurs through enforced intellectual distance, and in the Artaudian tradition through sensory and cognitive disorientation that compromises and destabilises the Cartesian subject position. Drawing on Foucault, Chow emphasises the difficulty of eliding the Cartesian while under the influence of the forces of liberalisation, as they carry with them constructs affiliated with transcendental hierarchy: dominance vs. subordination, and finitude vs. infinitude (Chow, 2012: 35), thus engendering externalities and obscuring inescapable complicity (Chow, 2012: 39).

The question of complicity can be approached from different vantage points. While the Brechtian tradition illuminates audience complicity through the articulation of the Cartesian subject-event relationship, the Artaudian tradition positions the artist to orchestrate a ‘cruelty’ that strips audience participants of their socially orientated and embodied constructs of good sense and taste. Chow suggests that this application of crudeness be termed pornographic (Chow, 2012: 27), as it exposes complicity through ritualistic enactment and the resulting rifts between quotidian identity, upheld through the dignity of good sense, and the normally therein contained crudeness of instinct and emotion. Punchdrunk's theatre draws on the Artaudian tradition and exists within a media culture that is dominated by transmedial development and a democratised ‘good sense’ that pervades across previously bourgeois and plebeian strata and erodes the boundaries between ‘good’ and ‘bad’ taste. This standardisation is necessary for scalable colonisation by distributed network technology, affecting both systems (Galloway, 2004: 95) and their users (Galloway, 2004: 114-115), and facilitates superficial democratisation and pluralism. The associated flattening of previously differentiated aesthetic domains suggests

the difficulty of challenging representation through crudeness, as both ‘lo-fi’ and ‘hi-fi’ aesthetics have been absorbed into mainstream expression.

A closer look at disruption as a function of emergence in relation to narrative forms that maintain a sense of stability and continuity may be more meaningful than an analysis of the fidelity of representation. De Certeau discusses place as a site or location that is suggestive of stability (Certeau, 1988: 117), defined by constructions or constructs (e.g. buildings, plans, hierarchies; imposing or implementing principles and order). He contrasts it with space as dynamically determined by actions and extensions: dynamically actualised by the “operations [...] of historical subjects” (Certeau, 1988: 118), fundamentally unstable, and subject to impermanence. De Certeau’s treatment of these concepts follows from the meaning of the French *lieu* (place), and *espace* (space). *Lieu* is derived from the Latin *locus*; location in relation to a definition or characterisation, perceived in relation to a specific purpose, and a subdivision of social space. It can refer to an occasion or a specific instance within a context, as in an appropriate (or inappropriate) moment for a particular action or statement, the situation of which is potentially both spatially and temporally bound. Place/*lieu* thus describes locations within hierarchies, situations, constructs that stabilise and establish positions, as well as social order. The French noun *espace* (space) is derived from the Latin *spatium*, and is close to the meaning of the English ‘extent’, as in ‘extension of (time or space)’; a field of directions and dynamic properties such as movement and time. De Certeau specifies that space occurs as a function of dynamic time and location, and states that space/*espace* only exists as it is performed, or practiced:

Space occurs as the effect produced by the operations that orient it, situate it, temporalize it, and make it function in a polyvalent unity of conflictual programs or contractual proximities. [...] caught in the ambiguity of actualization, transformed into a term dependent on many different conventions, situated as the act of a present (or of a time), and modified by the transformations caused by successive contexts.” (Certeau, 1988: 117)

Here de Certeau suggests that the enactment of space is an act of negotiation; iterative or adaptive movement through a terrain that, in the course of progression, presents a succession of conditions, circumstances, limitations and affordances. The verb forms of ‘place’ and ‘space’ make the differentiation clearer: ‘to place’ means to position, to set, while ‘to space’ implies an act of extension, both being products of practices rather than descriptions of unambiguous states or properties.

De Certeau’s definitions and differentiation of space and place concerns narrative in all its forms, with storytelling as an act of practiced space. In this view the practice of narration is the creation, unfolding and extension of a story time and –place: “Its discourse is characterized more by a way of *exercising itself* than by the thing it indicates.” (Certeau, 1988: 79, original emphasis). De Certeau discusses tactical storytelling as shape-shifting in relation to the

dominant order through *metis*, from the shape-shifting titan Metis in ancient Greek myth. *Metis*, as a skill, bears similarities to the contemporary understanding of rhetoric as “effective expression” (Bogost, 2007: 19-20), but in de Certeau’s interpretation it carries an explicit notion of the memory-dependent, experience-based ability to adapt and achieve maximum effect with minimum effort (Certeau, 1988: 81-83). It is subversive and undoes the proper place, i.e. performs a narrative spatial operation that disrupts and unsettles stability and order in its path as it unfolds.

In his discussion of memory as a mediator of spatial transformations (Certeau, 1988: 85), de Certeau claims that: “[...] it produces a founding rupture or break. Its foreignness makes possible a transgression of the law of the place. Coming out of its bottomless and mobile secrets, a “*coup*” modifies the local order.” (Certeau, 1988: 85, original emphasis) Here, de Certeau implies a disruptive or unexpected use of memory that, in the context of storytelling, underpins metaphor (from the Greek *metaphorai*; to carry or transfer) as the arrangement of setting that, through associations, creates the possibility of multivalent interpretation and meaning-making. The *metis* of memory, in de Certeau’s words, is thus a space of sorts; a “moving nowhere” with “the subtlety of a cybernetic world” (Certeau, 1988: 88) that extends its polyvalent meaning-making to “places where powers are distributed” via the vehicle of metaphor. Narratives, which are dependent on memory for their creation and interpretation, connect place and space, and transform one into the other; they “organise the play of changing relationships between places and spaces” (Certeau, 1988: 118). They are, according to de Certeau, examples of practiced space and/or spatial practice, unfoldings or extensions of space that negotiate a terrain composed of places. In the course of negotiation, story-journeys can both set or define places or, by virtue of *metis* and the memory cargo that metaphor carries, undo them.

De Certeau describes the marking out of boundaries, and the creation of “theatres of action” (Certeau, 1988: 122-126), as ‘founding’. This differential practice can occur as founding ruptures, effected through spatial transformations. In his discussion of the definition or marking of boundaries, de Certeau draws on the ancient Roman concept of *fas*, or “mystical foundation” (Certeau, 1988: 124), which was seen to be an essential precursor to an auspicious military or diplomatic campaign. *Fas* was a ritual circumambulation performed in three distinct phases; one within, but near the frontier of the Roman territory, a second on the actual frontier, and a third one outside the frontier, making a ritual incursion into the foreign territory in which the intended campaign was to take place. The purpose for the *fas* ritual was to make space as a preparation for the intended action to take place: it established a foundation for the campaign or coup. De Certeau calls this the “theatre of actions” (Certeau, 1988: 125), and likens this ritual function, on a miniaturised scale, to the function of the space-making of the story, a “field that authorizes dangerous and contingent social action”: or actions that are intended to undo or alter

existing social order. The skilful delivery of a story into a terrain that offers a range of place-orders thus represents this founding in the context of narrative, and can be likened to rhetoric.

The type of rhetoric discussed in this thesis is the procedural rhetoric of interaction design on digital communicative platforms, which concerns the expressivity of the underlying processes that make possible the procedural presentation of that content (Bogost, 2007: 24-28). Drawing on the idea of founding, used also by de Certeau in his discussion of the *fas* ritual, Bogost suggests that “processes that may appear unexpressive, devoid of symbol manipulation, may actually found expression of a higher order” (Bogost, 2007: 5). The processes that Bogost refers to are procedural and object-oriented programming processes (Bogost, 2007: 11-12) which he, in the context of computer programming practice, compares to “literary figures like metaphor, metonymy, or synecdoche” (Bogost, 2007: 12-13), i.e. symbolic language references calling upon subroutine processes. These, as other symbolic languages, are not neutral. They are formed within specific cultural environments in response to particular situations and thus carry within them the ideological structures characterising those environments. Furthermore, the very nestedness of the processes Bogost refers to indicates the emergence of narratives as a result of the friction and play between their encoded – or mediated – layers (Galloway, 2012: 31-33). The relevance of regarding the processes underpinning interaction design in the light of de Certeau’s theory of language and spatial practice is heightened when considering metaphors (and other literary devices, e.g. metonymy and synecdoche) as ‘vehicles’ (Certeau, 1988: 115) for the spatial trajectory and extension performed by stories. In this view, metaphor serves as the memory-dependent “coup” that “modifies the local order” (Certeau, 1988: 85) by creating possibility for polyvariant meaning-making and disrupting the univocal order of place. The performative and rhetorical efficiency of the story, according to both Bogost and de Certeau, thus includes this founding: the extension and making of space that provides “the necessary foundation” (Certeau, 1988: 124) for narrative action.

In his analysis of procedural logic and its facility as a vehicle for persuasive interactive narratives, Bogost explores both the limitations and the possibilities offered by the computal, and points to the importance of not just the content, but the semiotic potential of embodied participation in interaction. Bogost explores, through case studies of games, how procedural rhetoric is completed by the interactions of the player/participant, who embodies the progression of the narrative. Central to Bogost’s argument and his understanding of meaning expressed through procedurality are processes, which he regards as cultural objects that are “crafted from a multitude of protracted, intersecting cultural processes” (Bogost, 2007: 7). In the case of computing, processes are based on rules or algorithms, and the interaction of and with these algorithms – participation in the procedurality of their implementation – creates meaning through procedural rhetoric (Bogost, 2007: 4). Bogost’s procedural rhetoric can, in the context of interaction design, be regarded as describing the choreography of rules, if

choreography is taken to mean embodied abstract figures and the processes that connect them, including the order of their expression. Computational procedurality can thus be seen as the choreography of participant actions and navigation in an interactive system, as it “places a greater emphasis on the expressive capacity afforded by rules of execution” and is symmetrical with the statement “procedural expression must entail symbol manipulation, the construction and interpretation of a symbolic system that governs human thoughts or actions” (Bogost 2007: 5). While conversation can serve as a model for the call and response pattern of interaction and illustrates the basic pattern of input-process-output, it does not necessarily reflect the formal qualities of inscribed procedural rhetoric; for this, choreography may be a more apt metaphor: “*Procedural representation itself* requires inscription in a medium that actually enacts processes rather than merely describe them” (Bogost, 2007: 9-10, original emphasis). The enactment of processes thus carries meaning, and participation in the enactment of the meaning carried by procedural rhetorics integrates the participant within the interactive system. This human participation can be assigned higher process intensity, which, according to Bogost, creates greater potential for meaningful expression (Bogost, 2007: 27). In this instance, the interactive situation presents what Bogost calls simulation gaps, which, by providing affordances in the form of missing information and opportunities, invite the participant to intervene in and complete chains of events through his or her participation, employing mental synthesis or processing (Bogost, 2007: 43).

Bogost’s simulation gap resembles de Certeau’s regions, where programs/processes and actions interact (Certeau, 1988: 126). These regions are, according to de Certeau, as many as there are possibilities for interaction or intersections. They are dynamic spaces, “dual and operational”, and extend or come into being as a result of being expressed through interaction. Silverstone also enters this space in his discussion of the poetics of media and the stories that are carried by media when he states that mediation/structuration, in his view is “only completed in the mind or the life of the reader or viewer” (Silverstone, 1999: 46). Interface design that shifts from the transcendent and ritualistic towards immanent emergence must be more open in two directions, i.e. towards both the maker and the participant. As the dominant interaction design paradigm success is measured quantitatively and audiences are ‘trained’ (Parikka, 2012a: 27) to perform the actions generating the desired metrics, interactive systems are prone to confirmation bias that less deterministic modelling of interactions and participants could minimise.

In addition, the potential of metaphor to disrupt the order of fixative definitions with multivalence, ambiguity and dynamic possibility can be considered for systemic resistance to instrumentalised governmentality. De Certeau draws on the dynamic properties of the Greek *metaphorai*, to carry, or transfer; a vehicle that, via cultural memory, mediates spatial transformations from ordered place into dynamic space (Certeau, 1988: 85). Metaphor is thus

defined by de Certeau as a transgressive and disruptive element of the story, creating the possibility of multivalent interpretation and meaning-making. By terming this disruption delinquent, de Certeau invokes the latent persistence of ‘old gods’ or counter-rational forces on the transcendent rationality of place (Certeau, 1988: 129). Galloway suggests two modes of delinquency, or resistance to transcendent governmentality: irrationality as active resistance, and “silence, non-existence, irresponsiveness” as passive delinquency (Galloway, 2004: 114-115). This argument is given in relation to the totalising vision of the postdigital that is characterised by bioinformatics: biometric information, processed for identification purposes and to generate predictive models of behaviour (Galloway, 2004: 113-114), which, according to Galloway, enrolls all participants in hegemonic identity patterns:

Collaborative filtering is therefore an extreme example of the protocological organization of real human people. Personal identity is formed only on certain hegemonic patterns. In this massive algorithmic collaboration, the user is always suggested to be like someone else, who, in order for the system to work, is already like the user to begin with! Collaborative filtering is a synchronic logic injected into a social relation. That is to say, like the broad definition of protocol I use, collaborative filtering is a set of rules based on a pool of user disposition that affects each member of the pool (Galloway, 2004: 114-115).

Galloway’s turn to irrationality and silence as methods for resistance and delinquency calls on two historical archetypes for resistance: the fool and the hermit. Focusing on the former, the fool can be genuinely irrational, or occupy a tactically irrational position requiring skill, or *metis*.

In defining the myth of the centre as emanating not from an absolute, transcendent position, Derrida identifies the source as virtual and impossible to actualise, instead being formed and maintained by “structure, configuration, or relationship” (Derrida, 2001: 362). The amount of ‘play’ or free movement is determined by the strength of the mythical centre of any given system (Derrida, 2001: 352), i.e. the hold or dominance of a concept that anchors a set of definitions constituting a value system based on the perceived truth of this centre. Derrida challenges empiricism and the assumption of an objective ground truth, and positions the engineer as the *bricoleur* (Derrida, 2001: 360): there is no creation out of nothing, and no creator of a self-referential totality based on objective truth. Derrida declares all such truths to be part of another whole, another belief system, and states that “the engineer and the scientist are also species of *bricoleurs*” (Derrida, 2001: 360-361).

To Derrida, play disrupts presence, or the centre (Derrida, 2001: 369). The mythical centre, akin to the transcendent idea of a god or the liberal humanist concept of “so-called Man” (Kittler, 1999: 16), co-creates, circulates, reiterates, discusses, shapes and is shaped by that which, in a historical moment, defines a culture and its boundaries. It provides an anchor that both allows and limits play, setting rules that are never more real or durable than the reality and

durability of the mythical centre around which they are formed. Drawing on Derrida, Sutton-Smith articulates this ambiguity and instability of form more explicitly than other play theorists:

There is an endless play of signifiers of which children and all other players are capable (Derrida, 1970). All players unravel in some way the accepted orthodoxies of the world in which they live, whether those orthodoxies have their source in adult or child peer groups. (Sutton-Smith 2001: 166)

Play can be regarded as a core activity of daily life (Silverstone, 1999: 60), linked to ritual and performance, and generative of make-believe within its bounds in time and place (Silverstone, 1999: 61). The ambiguity of play and its ‘unproductivity’ suggests that it is a *tactic* in de Certeau’s terms. Play is central to Galloway’s proposal of irrationality as an active form of resistance to governmental control (Galloway, 2004: 114-115), and key to “overcoming systemic contradiction” (Galloway, 2012: 29) through an emergent adaptive facility that both accommodates and generates the freerplay within a structure. It is not irrational in an absolute sense; only in relation to the transcendent order it disrupts. Silverstone asserts that it is indeed rational, but that “its forms of rationality are not those of the mundane, the quotidian”; it involves a “move across a threshold” (Silverstone, 1999: 60), and is in that sense liminal. The tension between Sutton-Smith’s play rhetorics of the imaginary and the self, and the play rhetorics of power and identity, mirrors the tension between Caillois’s *paidia* and *ludus*, representing the challenge and dissolution of rules versus the creation and maintenance of rules. Sutton-Smith places the rhetorics of the imaginary and the self on common ground with freedom or the extension of potential, and associates the rhetorics of power and identity with victory and privilege, i.e. hierarchy and status. The dynamic exchange between freedom and rules is essential to play, and the narrative challenge of balancing them is its quintessence: when we challenge the gravity of the cognitively fixed and immobile, we are actively engaged in the (meta-) physical act of suspending disbelief. The play spectrum of Sutton-Smith and Caillois contains both play and ritual, as defined by Schechner. His definition of play states that play is “looser, more permissive” than ritual, and that it is “double-edged, ambiguous, moving in several directions simultaneously” (Schechner, 2013: 89). In Schechner’s view, play thus operates spatially like de Certeau’s *metaphorai*: story-vehicles that transport and mediate between place and space (Certeau, 1988: 115). Caillois and Sutton-Smith agree with Schechner that while one may be fully immersed in play, there is an awareness of make-believe that is connected to the bounded nature of play, supported by signals exchanged between the players (Schechner, 2013: 103). This, according to the difference between ritual and play outlined by Schechner, places play at the heart of performance (Schechner, 2013: 89).

Having introduced the theoretical background of this research, the next chapter will discuss literature that has been key to the analyses that follow.

Chapter 3: Literature review

3.1 Postidentitarian performance

The ‘immersive’ performance aesthetic as defined by Machon is surrounded by mystery, sometimes occurring in unusual or remote locations, and structured without a clear beginning or end. It is disruptive to the traditional sociality that surrounds visits to conventionally staged theatre, and offers sensory and psychological experiences that may be overwhelming or transport the participant to a different experience of self and/or time (Machon, 2013: 54). The immersive is often discussed as gimmicky in terms similar to video games, role-playing games and augmented reality games (Machon, 2013: 66). The shared immersive qualities of experience design performance and games are reflected in the use of the term as a measure of depth of psychological involvement in the games literature (Machon, 2013: 62). This reinforces the association with sensation-seeking and ‘low’ forms of culture that is often made by its critics. As will be explored in chapter five, experimental performance art has historically incorporated elements of ‘low’ culture, e.g. fairgrounds, variety shows and circus. It has tended to do so in a more direct manner than fine art painting or sculpture, which has often incorporated such influences as subject matter, rather than reimagined (or sampled) experiential forms. As a historically specific cultural expression, the immersive aesthetic may be regarded as reflective of its time and place. As Aherne points out in his analysis of de Certeau’s approach to historiography, the stories we tell, even of the past, emerge out of the present in which they are told, and thus, in their reimagining, reflect their situation (Aherne, 1995: 25). As such, the immersive aesthetic as a historical phenomenon may be regarded as a product and simultaneous critique of late capitalism: a tactic emerging in response to the entanglement of ideological efficiency and the encroachment of the data economy.

Rather than using the term ‘immersive’, Cull discusses immersive and multisensory theatres as immanent (Cull, 2012: 11-12), drawing on Deleuzian thought when she proposes a “postidentitarian philosophy of difference” (Cull, 2012: 17). An immanent theatre, according to such a performance philosophy, shifts the transcendent subject position toward that of a relational subject, formed differentially in interaction with their environment. Deleuzian immanence is discussed by Cull as the “participation, multiplication and extension of the human body” that is “produced by relations of force and encounters with the affects of other bodies” (Cull, 2012: 10). Cull’s Deleuzian perspective positions the embodied, or posthuman, subject in immanent theatres within a framework formed around acentric principles of organisation:

Our sense of *where* and *when* the human body ‘is’ may be dispersed in this model, but it is less a matter of us losing sight of ‘the human’ as it disappears into ‘a world of intensity flows’ and more a question of gaining a sense of humanness as an *open* quality: as an alterable and perpetually altering set of powers to act and be acted upon by other, nonhuman bodies (Cull, 2012: 10).

Extrapolating this statement beyond theatrical performance, it applies equally well to the systemic location of human participants within interactive environments where encoded layers include the conditions of possibilities created by pluralities of cultures and agencies, both embodied and mediated, and the subjective experience of identity is dynamic and potentially metamorphic.

Hayles defines posthuman embodiment as dispersed “through the body and its environment” (Hayles, 2002: 319), with agency and cognition as distributed, embodied phenomena. Hayles proposes, in place of the Cartesian subject, a relational, ambiguously boundaried subject in an environment that comprises “human and non-human cognizing agents” (Hayles, 2002: 303), including the technologies with which we interact. This perspective is relevant to Cull’s immanent theatres not only in regard of how company members work and make together, but for a consideration of the agency of the produced environment, including the designs for interaction embedded within the set. In her proposition of the posthuman, Hayles moves beyond the classification and differentiation of actors in respect of their cognitive independence (human-machine), as well as moving beyond hierarchies associated with classification that are embedded in representation (e.g. gender and species) (Hayles, 1999: xiii-xiv). Like Cull, Hayles draws on the Deleuzian immanent when considering the cognition of the posthuman subject as extending within a plane of immanence, rather than being organised according to the hierarchic and transcendental principles of subject-event relationships building on the Cartesian *Cogito*.

Hayles’ relevance to this investigation of Punchdrunk’s theatre is supported by the theories of Braidotti (2013) and Clarke (2008), who discuss posthumanism and postanthropocentrism from ecopolitical and systems theory perspectives, respectively. Braidotti incorporates human and non-human animal on a spectrum when she describes Borges’ classes of animals, i.e. those we watch television with, those we eat, and those we are scared of (Braidotti, 2013: 68). In the context of discursive constructs of gender and race, essential to normative categorisation, the non-ideal subject thus exists on a spectrum stretching between not-quite-man and animal that facilitates objectification and exotification: power imbalances rendered rational only within a transcendent subject-event relationship. The core of Braidotti’s critique concerns the Cartesian construct of Man that singularly transcends the animal state. The logical, and, according to Braidotti, sociopathic, extension of that position allows for the assignment of fantasmic qualities to both human and non-human animals who fall within the not-quite-Man to animal part of the spectrum, and they are thus more readily instrumentally objectified in narrative representation. Cull’s discussion of the Deleuzian definition of a minority as relative to a standard – and transcendent – measure, clarifies how this affects representation in theatre:

[...] Deleuze insists that a 'minority' is not a question of numbers, but of the subordination of difference to a transcendent measure. Under majority rule, groups such as 'women, children, the South, the third world' (but also nonhuman animals) are, despite their numbers, constituted as subordinate minorities in relation to a standard measure: *the supposedly universal model of Man* (Cull, 2013: 20, original emphasis)

Cull associates the Deleuzian minor with an aesthetic that subjects the language and tools of theatre to a greater degree of variation, and which, in doing so, diverges from conventional narrative structure and representational techniques (Cull, 2013: 20):

[Deleuze] suggests that the revolutionary nature of a minor usage of theatre lies in its affirmation of the primacy of cross-categorical mutations, its emphasis on the tendency of life perpetually to differ from itself, alongside its tendency to congeal into recognizable or categorizable identities. (Cull, 2013: 21)

Here, the notion of mutation that emerges from a minor, immanent position is introduced.

Clarke discusses minor mutation via the inclusion of non-human actors from a position informed by Latour. He argues that technological systems are co-emergent with psychic and societal systems, and therefore "a species of meaning systems in their own right" (Clarke, 2008: 19) that mediates between psychic and societal systems. Historically, the association between the mutant voice and the minor can be traced throughout the development of experimental performance art, where the antirealist, the absurd, the machinic, the broken and the failure of 'good sense', rationalism and representation have underpinned both artistic critique and the counter-attacks by its critics.

Clarke's discussion of the co-emergence of technological, psychic and societal systems may go some way to explain the development of the meta-narrative that gives Punchdrunk coherence as an organisational entity across time and space. Mediated by material practices and technologies that are part of a production system that supports a virtual storyworld stretching across different productions, this meta-narrative requires both the support and the participation of self-organising audiences. The participation of audiences as agents or 'connectors' within embodied interactive narratives suggests a reimagining of the machinic aesthetic that developed in modernist experimental theatre via the *Gesamtkunstwerk*, albeit this time within a 'machine' with agency that is neither fully mechanic nor cybernetic. The 'moving parts' enacted by audiences may be termed algorithmic; embodied metaphors or computational vehicles for meaning-making. The threat of annihilation of the human actor within the machinic draws on narratives of posthuman metamorphosis, given the form of shape shifting, transubstantiation and possession (Clarke, 2008: 11-12) in stories haunted by the latent 'old gods' of de Certeau (Certeau, 1988: 129-130). They can hide in full view as we resist fully acknowledging myth; since Enlightenment at least, the present has tended to lay claims to good sense and clean efficiency. The un-modern delinquent thus insinuates itself back into circulation, often in grotesque forms inspiring awe and fear, superstitions and perceived serendipity. In contemporary art and culture, delinquency is often given absurd form that is contained within

forms of play; explored within the confines of frames, screens, and durations, while in mediated politics it threatens to escape its frames. The knowing *mythopoeia* of metamodernism (Vermeulen and van den Akker, 2015: 65-66) where myths are carefully cultivated in full awareness of their irreality, can be seen in the metamorphic pseudo-religious practices of Punchdrunk ‘Spoiler’ fandom on Facebook, where the sharing of omens and ritualistic actions is carried out in hyper-aestheticised form. The articulation of how the delinquency of the un-modern ‘old gods’ is at work in our mediated interactions, and of its peculiar formalism, is a pressing issue for the critical discourse of the postdigital condition.

The participatory and user-generated forms of performance and subcultural practices that have emerged in the late 20th and early 21st century may reflect, like a mythopoeic mirror, the technological mythos accompanying embedded computation and the Internet of Things. Computation is no longer contained within a frame, creating a form of technological animism. The Cartesian critique of the posthumanist discourse and the postidentitarian performance philosophy of Cull can be applied to the shifting and displacement of frames within this mythos. Laurel, in *Computers as Theatre*, compares the computer screen and proscenium theatre side-by-side in her discussion of the Aristotelian narrative arc, applied to computer games and applications (Laurel, 1991: 9-10). The comparison is not far-fetched; containment of crisis in Aristotelian theatre is supported by the proscenium format and traditional theatre conventions, including the construction of narrative in orderly parts, initially three; *protasis*, *epitasis*, and *catastrophe*, later developed into five parts; exposition, rising action, climax, falling action and *dénouement*. Theatre as a place has an order, known and observed by all participants. In contrast, the immersive aesthetic, which builds on the extension of the performance space and the transgression of its boundaries that developed throughout the 20th century in experimental theatre and performance art, presents theatre as contested place or compromised space. It sets embodied agency and the challenge of representation on a collision course that leans towards the grotesque. Machon identifies the importance of Artaud’s *Theatre of Cruelty* to the development of the immersive aesthetic (Machon, 2013: 30, 38), and, like Cull, references Deleuze in her analysis of immersive theatre. However, the concept of immanence, in Machon’s discussion, stands in primarily for the sensory immersion she places emphasis on (Machon, 2013: 108-110), whereas Cull (and Deleuze, in his discussion of Artaud in *Difference and Repetition*) approaches immanence as more specific to subject-event relationships and a critique of the liberal humanist identity construct. The research presented in this thesis proposes that Laurel’s analogy of Aristotelian theatre as a model for narrative development for computer games and applications should, for the postdigital condition, be supplanted by immersive theatre. This can support a clear analysis of subject-event relationships and the articulation of delinquency and posthuman mutation beyond cybernetic romantic modernism within interactive systems.

A structural analysis of how immersive system narratives are influenced by transcendent vs. immanent subject-event relationships contributes usefully to the critique of the data economy. Galloway's term "cybertyping" concerns the categorisation of the digital subject in reference to the codification of the body according to gender and ethnicity (Galloway, 2012: 137), which embeds stereotypical representation within interactive systems. He proposes, as an alternative position, the "whatever" (Galloway, 2012: 139). Drawing on Deleuze and Agamben, Galloway proposes 'the whatever' as "a figure of pure singularity" that is determined in relation to "the totality of its possibilities" (Galloway, 2012: 140). Galloway recognises the complexity of this position, which should not be confused with transient anti-essentialism or the liberal fantasy that all have the opportunity to declare themselves free of their skin or gender (Galloway, 2012: 141). It is also not a rejection of difference, but a rejection of generalisation. This renders 'the whatever' a position of aesthetic and political incoherence, precluding easy incorporation into normative central myths (Galloway, 2012: 142). In tandem with the concept of an undefined agent, Dolan proposes a utopian form of performance for the original "no-place" interpretation of utopia or *ou-topia*, and links this to a "reconstructed humanism [that] is multiple, respecting the complexities and ambiguities of identity while it works out ways for people to share and feel things in common" (Dolan, 2005: 22). Dolan describes the in-the-moment experiences; idiosyncratic and personal prior to recognition and articulation as social and shared, as central to utopian performance. The formative or "embryonic" dwelling in uncertainty (Dolan, 2005: 65) thus emerges as immanent and generative of difference: a form of spatial operation that allows for the extension of possibility.

The categorisation of participants in interactive digital systems that are founded on data mining is part of the broader phenomenon of classification within administrative systems that inform "social and moral order" (Bowker & Star, 2000: 5). The objectives of data mining in digital systems include personalisation for the purpose of returning searches and suggesting content that is more relevant to the user, and more notoriously, pervasive surveillance serving transnational governmental interests. In Punchdrunk's theatre, anonymity and ambiguity contribute to producing alternative conditions for interaction and social organisation, regulated not through longitudinal monitoring of individuals, but through detailed attention to the quality and nature of interactions. Classifications used within Punchdrunk systems are not concerned with the continuities of participants outside of the interactive system, but on the particulars of the interactive processes that occur via the interface. This reflects immanence rather than transcendence, and manifests in extreme attention to situated detail. The multimodal communication methods used within the company, and between the company and participating audiences, are context-specific and result from deeply layered process: through this, ambiguity is generated. The shared and embodied practice of differential meaning-making across the interface functions as the *metaphorai* referred to by de Certeau: vehicles of mass transportation

(Certeau, 1988: 115). Ambiguity, in its tolerance of difference, is a condition for metaphor as an unsettling form of transportation within storyworld and between discursive registers, and Punchdrunk audience members are co-opted as story-vehicles. Returning to theatre as a model for conceptualising interaction design, but replacing proscenium theatre with immersive participatory performance, thus provides a methodology for articulating the ‘whatever’ as an applicable concept for postidentitarian participants in interactive systems.

3.2 The postdigital shift

The digital as a historical moment signifies a period of approximately 50 years, spanning from the introduction of computers to military and government organisations in the early 1960s, with isolated machines performing discrete processes, through to the 2010s, when computing has become ubiquitous, networked and always-on (Berry, 2014a: 2). Berry argues that we have already entered the postdigital moment (Berry, 2014a: 47). Digital technology mediates much of quotidian life through mobile devices, embedded networked computing power in engineering and appliance technology, and computational administration of vital infrastructures and services. Berry describes this as a computal rather than a digital era, highlighting the fact that the digital no longer ‘stays put’ in its encoded, modular form, contained within boundaries and vessels that we can understand as physical phenomena. Instead, it flows around us as embedded computational processes: spatially pervasive and always-on (Berry, 2014b). He describes this as a shift from objects to streams, in both cases implying encoded entities for computational processing (Berry, 2014c), but differentiating between that which is conceived as bounded versus that which is perceived as flow. A comparison with the shift from modernism, as a utopian texture of feeling that looks towards the liberation from the old by disruptive forces of change and revolution, to postmodernism, where the purity of the new is compromised by complicity and systemic reflexivity, suggests that the postdigital is a revisitation of the postmodern.

Contreras-Koterbay and Mirocha emphasise the ‘fluxual’ in their discussion of the postdigital and the New Aesthetic, but not so much in regard of the lack of boundedness described by Berry as in the instability of form created by the possibility of interactivity with visual artefacts (Contreras-Koterbay and Mirocha, 2016: 13). Addressing the tension between ontological and epistemological approaches, the authors point to aesthetics as a "third form of experience" between and dependent on ontological and the epistemological perspectives; even proposing aesthetics as a way to avoid the pitfalls of either (Contreras-Koterbay and Mirocha, 2016: 25). Citing Alexenberg, the authors draw our attention to the interplay between “biological, cultural, and spiritual systems, between cyberspace and real space” (Alexenberg, 2011: 35) and emphasise the need to extend Bridle’s New Aesthetic to perceiving contemporary reality as an augmented space (Contreras-Koterbay and Mirocha, 2016: 27) with human and

non-human agencies.

The authors' critique of screen essentialism remains primarily preoccupied with surface, for example in their comparative analysis of Morley's *The School of Athens* (1972), and Raphael's painting with the same name. Focusing on glitches in the surface application, an analysis of the subject-event position implied in the vanishing point perspective, fundamental to renaissance art and Raphael in particular, is absent. Morley's selection and treatment of Raphael's work affirms its significance in the history of art and spatial representation, and yields further depth to his stance on the accidental grid shift as a critique of the liberal humanist construct of Man. Contreras-Koterbay and Mirocha's preoccupation with grids in the subsequent analyses of the works of Sanders Pierce, Nees, Noll and Nake suggests that they recognise the significance of perspective grids as representation of space and, by extension, the subject-event relationship – particularly in regard of hierarchies of objects, and between the subject gaze and the objects regarded (Contreras-Koterbay and Mirocha, 2016: 110-118). If, as the authors propose, the (post-) digital is to be included in the broader critical history of Western art, it needs to be anchored within its historical dependencies and trajectories. The claim of bounded novelty associated with the digital as a surface aesthetic can only be maintained as a 'pure' and distinct epoch through naïve and/or ideological externalities, betraying a modernist texture of feeling.

The question of digital representation, which Contreras-Koterbay and Mirocha address by way of analyses of the work of Zach Blas (Contreras-Koterbay and Mirocha, 2016: 163-164) and Metahaven (Contreras-Koterbay and Mirocha, 2016: 168), aligns the postdigital with the discourses of Phelan, Derrida and the broader critique of identity and totalising forms of representation that runs through modernity in Western art. Challenging identity and the hidden centre, or central myth, of neutrality associated with the digital, Blas and Metahaven stand out as relevant to the postdigital as a shift away from the naïve reboot of modernism that emerged with the digital in its utopian phase.

The pervasion of the personal by distributed, always-on connective network technology (Berry, 2014b) positions the totalising identity construct, and the associated conditions of possibility, at the heart of a postdigital critique. The seeming contradiction between control and distributed agency is addressed by Galloway, who articulates how embedded networked computing simultaneously mediates control and decentralisation by way of his analysis of internet protocol (Galloway, 2004: 8-10). Here, code and computation fulfil the role of the mediating story of de Certeau as a vehicle for transformations between the order of place and the extension of space (Certeau, 1988: 85). De Certeau's theory furthermore informs the function of story as 'founding' or preparing a theatre of action, where the hiddenness of computational processes predisposes their mystification (Galloway, 2004: 99) and facilitates the naturalised influence of networked media on the social (Couldry, 2012: 84-89). A more explicit

understanding of the narratives carried by code and the computational systems with which we interact may be articulated through analysis of procedural rhetoric, defined by Bogost as the production of persuasive meaning through interaction (Bogost, 2007: ix-x). Galloway and Berry's investigations of the cultural and societal influence of computation are supported by Bogost's functional analysis of the performative expression of algorithmic processes through participation. In his view of procedural rhetoric, arguments are authored through processes that are partially completed by the participant (Bogost, 2007: 28-29). Through systemic interaction and completion of system narratives, we embody, enact, and reinforce their rationalities (Bogost, 2007: 43), and Bogost argues that the inherent procedurality in digital objects co-opts us into internalising their logic. The relationship between computational and instrumental reason discussed by Berry (Berry, 2014a: 38) suggests that these rationalities are subject to a pervasive or even persuasive influence issuing from the procedural nature of code itself: "[code] objects contain the logic of behaviour, processing, or merely act as gatekeepers and enforcers of a particular form of rationalization" (Berry, 2014a: 35). The rationality embedded in and expressed by code, and the software that mediates our interaction with it, thus needs to be investigated and understood as instrumentalised (Berry, 2014a: 38). Its relative hiddenness and metaphorical nature means that the mechanics of our interactions with computational processes take place out of view, including how participants are represented within interactive systems. On this level, a critique of digital representation (or modelling) of participating agents, and the articulation of subject-event relationships, become as essential to a postdigital critique as the deconstruction of representation in experimental and avant garde art in the 20th and 21st centuries.

The influence of monetisation models on the formation of system narratives makes it essential to understand the logic – or structure of thought – of code, software and their instrumentality in the contextual frame of the capitalist economy they are located in (Berry, 2011: 61). Software and digital objects, including the search engines that determine what is afforded visibility online, cloud archival facilities, and platforms for distance communication, perform necessary infrastructure functions that have traditionally been fulfilled by public services, yet they are now provided by privately owned organisations. The analysis of the commercial and academic software engineering environment must be informed by the observation that "[programming] is an engineering process that has grown in lock step with the demands of what we might call cognitive capitalism" (Berry, 2014a: 83). In order to understand the relationship between computation and issues of control, capitalism and instrumental rationality, Berry argues for the development of a critical theory of the digital based on the position of the Frankfurt School who, against the backdrop of late 19th to mid-20th century European history, sought to develop an agenda for social change based on dialectics, self-reflection and the acknowledgement of contradiction. Advanced or late capitalist society is,

according to Berry, in the grip of irrational rationalisation as a result of “how the process of rationalization is itself organised” (Berry, 2014a: 35). In other words, rationalisation and technology are developing according to the objectives of unbridled ambition for economic expansion and a zero-sum mentality, creating “the conditions for a decline in critical thinking, and the increase in the susceptibility of a society towards authoritarian politics and extreme or populist movements, such as Nazism” (Berry, 2014a: 36). Moreover, such totalitarian tendencies manifest in a “world where capital becomes highly centralized and the economy and political system become increasingly intertwined, leading to a world caught up in administration” (Berry, 2014a: 36). Under such conditions, efficiency has emerged as a proxy for ideological purity, characterised by a transcendent aura and evasive of effective scrutiny. The hiddenness, discussed by Berry, of processes and the digital representation of subjects within them that form models for participation in media rituals, does not prevent an analysis and subsequent critique of interactive systems if we draw on the history of performance art. Here, a critique of representation, hierarchy and subject-event relationships is already established.

The naturalised interaction through visual representation in interface design, which generally seeks to obscure computational processes, suggests an instrumentalised liminality peculiar to interaction design that can be critiqued from the perspective of performance theory. The seemingly decentralised mediated social interaction of the postdigital has, in shaping the social (Couldry, 2012: 84-89), also shaped postdigital media rituals. Couldry identifies media rituals as key to media power, stating that “Rituals are enactments of power through form. According to Couldry, rituals are “above all *patterned action*” (Couldry, 2012: 72). Media rituals are thus actions that are patterned in such a way that they perpetuate and reinforce the “myth of the mediated centre” (Couldry, 2012:67), i.e. the mediated enactment of the dominant values and beliefs that define a culture. Schechner, citing Durkheim, states that rituals are “performances enacting known patterns of behaviour and texts” that embody, rather than express, ideas (Schechner, 2013: 57). The power of ritual is founded on the power of embodied participation, supporting Bogost’s introduction of procedural rhetoric as a framework for understanding the rhetorical *process* of interactive media, made effective through the participation, enactment and completion of system narratives by the participant.

A postdigital critique that is aligned with the postmodernist structure of feeling and the posthumanist discourse finds the centre of the digital myth within the construct of so-called Man (Kittler, 1999: 16). The mediation of participation and the modelling of participants as data objects within computational ‘flows’ bring into question the concept of the Cartesian subject and its critique from a posthuman perspective (Hayles, 2002: 303). While opening up towards modelling participation in interactive systems based on tasks, the predominant approach in software engineering remains focused on the modelling of ‘users’, even seeking to define them in terms of psychological profiles and characteristics that are assumed to be stable (Benyon,

Innocent and Murray, 2014). This, and other approaches to user modelling in software engineering, is built on a tradition of conceptualising participants as mechanical parts; an assumption both supported and challenged by the research presented in this thesis. While participants are essential moving parts of Punchdrunk's interaction design, they are agents, and regarded as changeable. Galloway argues that the algorithmic profiling (or 'cybertyping') of participants in interactive systems through interpellation and collaborative filtering is inherently contrary to difference and reinforces hegemonic patterns (Galloway, 2004:114). However, the pervasion of this effect remains uncertain. Initial observations of the Punchdrunk fandom, as discussed in the introductory chapter of this thesis, suggest that the behaviours of participants in interactive systems are responsive primarily to local conditions. If the effects are local, then the formation of generalised queries according to the information (data) thus gathered will contribute to the generation of circular arguments, and the failure of thought (Deleuze, 2014: 209-210). Complicating this position is the question of what, and where, is 'local' in the postdigital condition, and how participants are conceptualised in relation to virtual localities. Berry and Dieter suggest that the distributed trajectories of computing should be considered as the location when analysing the postdigital condition, beyond 'the digital' as static and containable (Berry and Dieter, 2015: 4).

In regard of locality, Parikka suggests in his discussion of psychotechnics as a concept inspired by the theories of Kittler and Stiegler (Parikka, 2012a: 73-74) that a political economy for the postdigital era should take into account the participants that realise or complete the narrative unfolding. The performance of participants in interactive systems falls under the rubric of affective labour, and represents an investment of cognitive embodied processes that are essential to, but not fully accounted in, cognitive capitalism (Parikka, 2012a: 74). The site of computation must therefore be considered to include participants, which suggests the instrumentalised or encoded/inscribed body and positions the question of embodiment as essential to a critique of the postdigital. In the affective industries (Bishop, 2012: 277), including performance art, game design, the design of interactive marketing, platforms for distribution and interactive service systems, participating audiences are co-opted in the production and enactment of the mediated narratives of cognitive capitalism (Lovinck, 2011: 147). The cognitive processes of participants interact, or even mesh, with other agencies, human and non-human. The posthuman discourse, which hosts the bifurcation of the cyberromantic and the postidentitarian paths, allows us to consider the agencies at work in the light of transcendent and immanent subject-event relationships, and reflects how we conceptually model the agencies at play. As Berry states, software engineering operates according to ideological efficiency constructs; a modernist, even romantic, texture of feeling that yearns for purity of purpose. The delinquency of the social must appear impure in the light of ideological efficiency, yet impurity is an essential condition for difference. If the postdigital discourse is a response to digital

modernism, the messiness of the social, including the articulation of its darker corners and the complexity of social exchanges, needs to be addressed. Parikka's "weird materiality" (Parikka, 2012b: 99) defines the postdigital continuum of materialities from "hard" or physical components to "soft" or symbolic "signs, meanings, attractions, desires" (Parikka, 2012b: 97), including the "processual" (Parikka, 2012b: 99). In addition to this, Bogost bases his theory of procedurality and the expressive power of procedural rhetoric on the processual in computing (Bogost, 2007: 3), and identifies procedures or subroutines (or callable units) as material in the digital sense. Bogost identifying them as similar to "metaphor, metonymy, or synecdoche" (Bogost, 2007: 13): vehicles for changing or multiplying meaning, or producing difference. Here, the modernist-digital distinction between human and non-human processing blurs, as procedures fill the role that metaphors and symbolic figures play in human-human communication. The "fluxual" postdigital conditions of possibility (Contreras-Koterbay and Mirocha, 2016: 13) thus question the fixity of human identity, particularly in regard of distinction and agency.

Parikka includes "signs, meanings, attractions, desires" in the expressive qualities of the "soft" part of the digital materiality continuum (Parikka, 2012b: 97). He emphasises with this the non-physical "thing-power" that pushes "our understanding of objects towards their operationality – that things do stuff, make a difference" (Parikka, 2012b: 98), by way of the meaning-making of human participants. This facility for moving the mind draws comparisons with Certeau's *metaphorai*, suggesting *metis* as another word for 'thing-power' and further questioning the meaningful distinction between the different materialities of postdigital interface design. The 'weirdness' of these materialities, which in Berry's words include the "machinery that certainly does not 'appear' – that is, software, algorithm and code" (Berry, 2014a: 55), facilitates its mystification and complicates an understanding of it as material as long as we regard the digital within a modernist structure of feeling. Postdigital interaction design must include the cognitive processes of participants as moving parts, with Berry's point about culture happening to the digital influencing representational constructs of participants. Flattening the hierarchy of material agencies in this way suggests not so much a New Aesthetic as a new, and yet un-modern, form of animism.

3.3 Interaction design

The non-modern metamorphosis discussed by Clarke in a posthuman light draws on Latour in proposing quasi-objects and quasi-subjects (Clarke, 2008: 51) to address the impossibility of neutral intermediation and 'pure' separation of the human and non-human. These quasi-objects/subjects instead occupy the middle ground as active mediators in an ongoing exchange, and Clarke argues that the ambivalences of translational mediation shares with the literature of metamorphosis the "discourse of the daemonic". Here, Clarke suggests that the hierarchic

separation of human and non-human results in the splitting of the narrative middle ground of quasi-objects/subjects into the two dichotomous, but equally mystified, realms of the angelic and the daemonic. The quasi-objects of Latour, tracing networks that are “real, discursive and social”, are employed by Clarke as a discourse of the in-between, and the “middle ground” they occupy between human and non-human agencies (Clarke, 2008: 51) can therefore be regarded as relevant to interaction design.

Clarke stresses the fundamentally metamorphic nature of humans as they form ensembles with the non-human, mediating between the natural and the social (Clarke, 2008: 54). Thus, according to Clarke, the essential morphism of (post-) humans allows the “distinction between the human and the daemonic to lapse” and suggests the “daemonic situation of medial contingency” as an allegory of the human (Clarke, 2008: 54). For the purpose of interaction design and the conceptualisation or modelling of the agencies involved, the first step of demystification could occur through bringing the ‘daemonic’ into a plane of immanence with human participants in interactive systems. De Certeau’s un-modern delinquent might thus be accommodated and even stitched into the fabric of interaction, rather than relegated to transcendent realms where it must be either rejected as myth or preserved in superstition. The articulation of the shadow side of interaction design, so that it may be met with a response on the same plane, is needed for culture to happen to the digital, as Berry suggests. To this end, the potential for delinquency in the participating agencies must be reconsidered, as must separationist purity-as-efficiency, expressed in the formulation of externalities and the ‘outsourcing’ of processing ambiguity and the shadow side of interaction. Wardrip-Fruin initiates a critique of how algorithms are regarded primarily in terms of their efficiency in computer science (Wardrip-Fruin, 2009: 17), whereas he calls for their critical and aesthetic appreciation as agencies. In line with the proposal for inclusion of participants in Parikka’s ‘weird materiality’ of the digital, it follows that the agency of participants can be regarded as algorithmic and expressive within interactive systems. Zima, in his critique of good sense and taste, discusses transcendent beauty as fundamentally totalising, in contrast with the sublime that “destroys unity” (Zima, 2010: 127). Efficiency and purity of purpose turns art into propaganda; on the level of interaction design, it produces a distributed and participatory, yet totalising, rhetoric. Through these critiques, the possibility emerges of embodied, participatory difference as an expression of a postdigital sublime, for which we need proxies for delinquency, failure, and dissolution. For the modelling of participation in such interaction, we might revisit de Certeau’s theory of *metaphorai* as ‘moving parts’ or story vehicles, given effectiveness by the *metis* or skill with which they transform the order of place into the instability of space, or establish new orders in emergent space.

Associated with this argument is the differentiation of the general and the particular in Deleuze’s discussion of difference (Deleuze, 2014: 2-3), which gives a structure for analysis of

the tension between totalising forms of representation and emergence, applicable also to the modelling of participants for interaction design. In relation to emergence, Deleuze's critique of the dogmatic image of thought via Artaud (Deleuze, 2014: 209-210) and, from there, transcendent vs. immanent subject-event relationships, overlays with de Certeau's theory of space and place (Certeau, 1998), as well as the posthuman discourse (Hayles, 2002; Braidotti, 2013; and Clarke, 2008). The relevance of the posthuman discourse to the subject of postdigital interaction design is suggested by Galloway's discussion of pervasive networked computing as "the society of control" (Galloway, 2004: 21-27). Galloway argues that this term describes a society where control is disseminated, pervasive, ubiquitous, of no obvious fixed abode and administered with and through technology, rather than centrally located and issuing from visible institutions or a sovereign power. He draws on the periodisation applied by Deleuze in his development of Foucault's historical perspective on the administration of power (Galloway, 2004: 22), and Kittler's position, which considers discourse in relation to the technologies that define and shape historical periods (Galloway, 2004: 22-23), and discusses both as determinants of discourse and knowledge formation. Galloway proposes networked computing as the defining technology of the present and, through his analysis of the primary types of protocols that lie at the heart of the internet, demonstrates that networked computing does not decentralise, but distributes control. However, the lay user often perceives it as doing so, as it diffuses the locus of control even while distributing it (Galloway, 2004: 25).

The posthuman discourse of Hayles, which contrasts the modernist-digital cyborgian fantasy of second birthing (Hayles, 2002: 299) with distributed cognition as an "emergent phenomenon created in dynamic interaction with the ungraspable flux" (Hayles, 2002: 304), can inform the modelling of participation in terms of "thing-power" and beyond the trappings of the liberal humanist concept of the transcendent subject. Braidotti argues that the transcendent fundamentalism that drives systemically expressed capitalism is sociopathic (Braidotti, 2013: 65), and stresses an immanent interpretation of the posthuman that, if applied to interaction design in its full logical extension, would erase any clear demarcation between 'relevant' and 'irrelevant' materialities for interaction design. Relevance, as all forms of categorisation, is dependent on the formation of externalities, and subject to ideological prioritisation. The external boundary of postdigital distributed networked computation must thus, if considering the interacting agencies, by definition be ambiguous, as proposed by Galloway:

A distributed network is always caught, to use an expression from Deleuze and Guattari, *au milieu*, meaning that it is never complete, or integral to itself. The lines of a distributed network continue off the diagram. Any subsegment of a distributed network is as large and as small as its parent network. Distribution propagates through rhythm, not rebirth (Galloway, 2004: 94).

Based on the technological pervasion of the intimately personal and the problematic of opting out of the digital moment, postdigital materialities, while indefinable in their absolute extension, should reasonably incorporate and articulate the mediated interactions of dynamic participants. The distributed agencies operating through them, which, “continue off the diagram” according to Galloway, suggest the composition of participants with the agencies or quasi-objects discussed by Clarke to form *metaphorai*, with ‘thing-power’ of intense interest to a postdigital critique.

Postdigital technology must not be regarded as angelic or daemonic on a supernatural plane, excluded from the scrutiny to which our culture, institutions and means of production are historically subjected. Nor should it be left out of analyses of the influence of infrastructures on the formation of cultural and societal narratives. Berry (Berry, 2014a) suggests a framework for understanding the wider influence on culture, society and our institutions of the digital that starts with an investigation of the computational itself. He calls for an investigation of how its structure and modes of mediating the continuity of the physical world affects our being in the world, and how it interacts with and supports wider economic and political objectives. Berry argues that our reliance on computational processes for the rote or “heavy lifting” of cognitive processing required for administration of vital infrastructure (e.g. financial, healthcare, and transportation systems) leaves us dependent on systems with very particular underlying logics. In addition to performing administrative functions, the computational also aids processes and decisions that can be made on an algorithmic basis. The rationalities expressed by these logics become “internalized within the user as a particular habitus” (Berry, 2014a: 37-38) through interaction. Their logics are embedded and reinforced within us as we participate in the procedural rhetoric of computational systems, enacting their rationalities in our interactions with institutions and everyday life. In other words, the ‘making real’ that occurs during the practice of interaction is a reflexive confirmation of the validity of the set of meanings and values that are intrinsic to the systems with which we interact (Berry, 2014a: 94). The importance of these systems to our everyday affairs and societal infrastructure, and our role in the procedural completion of their system narratives, thus calls for scrutiny. Berry argues that the rationalities of these systems can be understood by examining the relationship between computational and instrumental reason (Berry, 2014a: 39). Central to this argument is the perspective on the computational as cultural, and on code objects as expressive, on an integral level, of “assumptions, values and norms” (Berry, 2014a: 40). A virtual shadow, based on constructs of class, gender, search and browsing habits, is formed based on data harvesting from our online interactions and feeds into the increasingly panoptical and distributed governmentality made possible by software and digital systems (Berry, 2014a: 39).

Reductive generalities, as constructs formed in the name of clarity and efficiency, serve us ill when applied to the representation of our participation in interactive systems. They

generate a system aesthetic that is more feudal than dynamic; designed to maintain intra-system order based on roles weighted towards stasis. The complexity of systems designed to meet, respond to and incorporate delinquency, as differential deviation from the norm, remains a challenge in the field of computer science, but it may ultimately become necessary to design for such complexity. Hybridicity and morphism, articulated on the system level not as angelic or daemonic phenomena but as essential expressions of difference and dynamism that are incorporated into the design of interaction, may not only be more robust in the long term, but also invoke the sublime. Building on the critique of representation in performance art and the development of the immersive aesthetic, this research analyses the work of Punchdrunk as a model for emergent postdigital interaction design, with participants on both sides of the interface integrated as agents within the ‘weird materialities’ employed to produce experiential space. What makes us most human, as Galloway states, is not the degree to which our identity is permanent, but our facility for adaptation to and negotiation of systemic contradictions (Galloway, 2012: 29). Or, as Latour asks regarding the definition and form of the human: “A weaver of morphisms – isn’t that enough of a definition?” (Latour, 1993: 137).

Having introduced the theoretical background and key literature relevant to this research in this and the previous chapters, the next chapter will outline the methods used in this research and the ethical review.

Chapter 4: Research methods and ethics

This research considers the work of Punchdrunk, in particular their hitherto largest productions *The Drowned Man* and *Sleep No More*, as interaction design, describing the exchanges and parsing of actions that take place on both sides of the interface. The narrative structure used by the company remains similar whether producing large or small works, but this research focuses on their large-scale productions, which attract sizeable audience over long periods of time. The objective of the research was to investigate how the making cultures of Punchdrunk and their audiences shape conditions of possibility within their interactive systems, and the possible ramifications for digital interactive systems, particularly in regard of how audiences and participation are conceptualised and modelled. The scale and robustness of their work demonstrates its relevance to a study of interaction design, with a potential for broader application in digital materialities. The analyses undertaken were informed by performance theory, combined with de Certeau's theory of space and place, Deleuze's Cartesian critique, and the posthuman discourse:

Narrative, media, and systems theories, in their various investigations of the ways media move in and out of blind spots, can compensate for each others' partialities (Clarke, 2008: 24).

The 'blind spots' created by disciplinary partialities have far-reaching consequences when the infrastructure created by the discipline (in this instance software engineering) pervades the social and administrative via distributed networks, and is scaled both in the Cartesian dimension and in respect of being replicable. This research questions the Cartesian transcendent thought underlying much of digital infrastructure and interaction design based on this infrastructure, particularly in regard of how the parsing and modelling of participants in interactive systems and their actions.

The research presented in this thesis started in communication with the company in 2011, and culminated in participation in the build and take-down of *The Drowned Man* 2013-2014 as a member of the design team. The embodied nature of both the creation of and participation in Punchdrunk's productions suggested that a participant study would offer the best perspective for observation and recording of data. The company, their activities, and even the participation by their audiences are formed around making and giving form to narrative: any meaningful research into these practices needed to occur on the same level. The research is thus based on participation in the practices of the company and audience members, supported by interviews with company members selected for their direct material contact with the creation and maintenance of the interactive interface and live participating audience members to record their direct experiences from interaction with the interface. The offer to participate as a

researching designer fit with the objective to gain as unmediated insight and experience as possible into material and social practices within the company. The company engages a wide range of volunteers, mainly theatre design students, in the build of their productions, so participation as a researcher did not seem out of the ordinary to company members. The build and run of *The Drowned Man* involved c. 500 people in total, including 250-300 from the time of the opening of the show, of which 150 were active on a daily basis during the run (COM-M-29072014). Access to the sets and working practices was granted to me on the same terms as other volunteers, allowing integration into the build and design team. For participation as an audience member, I purchased tickets as would any other member of the public, and participated as a regular, anonymous and masked audience member without any preceding introduction to any of the performers on the nights I took part. Performer interviews were scheduled after the run, and I was not familiar with any of the performers on the nights I took part as an audience member.

As a participating maker in an organisation that operates on distributed agency, your alignment with the aesthetic of the company is key to a coherent result. Although rarely discussed, the meta-narrative of Punchdrunk supports both the recruitment of participants and aligns their participation. Fundamental to this is the unquestioned commitment to the ‘world’ being created, and by extension, the company’s commitment to their own storyworld practice and its participants, including audiences. The social ordinary was shut out from the beginning of the build, with all windows to the buildings used by the company being blacked out. You entered and exited the production area, where ‘the world’ was discussed as if already present and awaiting realisation, by signing your name in reception. At the first visit, you were given a tour of the building, where the different areas were introduced in terms of the storyworld being built. I started work immediately within a small team of designers with handwriting text segments to be embedded in the set, including hidden notes with literary references, letters that formed exchanges between characters in the play, handwritten prescriptions for psychiatric medication to film industry workers, award certificates in period style, address books, and other small set details. All were to be authentic to 1962 (the time of the storyworld), necessitating research into local formatting of telephone numbers and addresses at the time, checking what types of medication were available, and so forth. During the build and early run no interviews were conducted, as the research was designed to be unintrusive; interviews commenced after the build was finished and the production had been running for some time.

I worked with the detail design team throughout the build of *The Drowned Man*, and saw the set develop from crudely mapped-out expanses of concrete halls, to the elaborate maze of fully realised rooms it was to become. As spaces became more formed, performers started rehearsing there. Although I had been there from early on, the building became increasingly difficult to navigate, not because of rehearsals, but because the space became increasingly

unfamiliar. The many people who participated in the build all brought their own commitment to the storyworld in the form of making and interpretation, which gave the impression that the world, while remaining coherent, folded in on itself in increasing complexity once the space was mapped out; it had to go inward, laying down layer after layer of encoded narratives and repeat patterns, extrapolated and condensed from previous layers. In combination with the building up and building in of rooms and walls, I had the sense that the bedding down of these layers somehow thickened the space and made it deeper for those who would later venture into it. As no daylight entered the performance space (although the windows in the design studio were never blacked out) for the duration of the build, and the only open access to the building (apart from the loading bay, which for obvious reasons had to be opened at times) for crew was via a manned door, where you signed in and out, the integrity of the storyworld remained unbroken, allowing this thickening to build up inside, like pressurised experiential space. The vastness of the space made it almost impossible to notice your own contributions, as they were distributed over such a large area. Your efforts, in that sense, were absorbed into the communal efforts to layer and thicken the story space. This carried on right up until the space opened to the public.

I visited both *Sleep No More* and *The Drowned Man* as an audience member, to experience the shows as a regular, masked participant. Having participated in the build of the one show but not the other didn't seem to make a significant difference to the experience as a member of the audience: there was so much to be explored that was created by others, and any remnant of familiarity was blown away by 'the show' as a product of all the people who participated. The devising approach to theatre making distributes agency in a manner that creates unfamiliarity, as no one person is in control of the full picture. The complexity resulting from distributed agency in the making of the show created an experiential space that, in its convoluted vastness, claimed even the very few of my own contributions that I happened upon. It was almost shocking to find something I had touched and made absorbed into a whole that to such an extent was unknown to me, although I had been a hands-on participant in the making of the show and seen the set develop from the beginning. This engendered a sense of nakedness, even, that counteracted any sense of enhanced belonging or control that one might otherwise have assumed.

4.1 Methodologies

As immanence and making cultures are key to this research, I will first address the physical methodologies. Subsequently, in accord with how the theoretical framework was formed in response to analytical needs and observational data gathered in the field, I will account for the main critical theories used. The core research was undertaken using ethnography, in the form of a three-year participant study with the company (Punchdrunk and Punchdrunk Enrichment) that

began in 2011 with dialogue with members of the company in person and via email and telephone. At this time, they were scouting for London properties to develop a large production. As this process was lengthy, the company invited me to work as a designer with the smaller Punchdrunk Enrichment production *The House Where Winter Lives* in November 2012 through to January 2013, and from April 2013, when premises were secured, the large-scale Punchdrunk production *The Drowned Man – A Hollywood Fable*, which opened in late June 2013. I maintained a less intense presence within the design team through the year-long run of the production, during which I participated as an audience member, and re-engaged in hands-on terms with the conclusion and break-down of the production at the end of July 2014. In December 2012, I travelled to New York to participate as an audience member in the production *Sleep No More*.

I recorded research data in the form of field notes taken during participation and semi-structured interviews with company members and audience members. The working conditions during the build of productions and the research objectives necessitated active participation, making it key to gather data during this time using unobtrusive methods that did not interrupt regular processes within the teams and the functioning of the company. I therefore did not commence interviews until after the build was concluded. I interviewed six company members in direct contact with the production during the run and breaking down of the production: one director and choreographer, two production managers, one stage manager and Black Mask, one designer, and one actor. Company interviewees were selected on the basis of having a senior role with direct and unmediated involvement in the production and maintenance of the interface, i.e. the physical production, across a range of skills including acting, choreography, design, stage management, and production management. Six audience participant interviewees were recruited on social media and by word of mouth, focusing on first-time participants with one exception, who had attended one previous production some years prior. None of the audience participants who were interviewed were so-called superfans or members of the social media ‘Spoiler’ groups, and the audience participant cohort that were interviewed did not overlap with any of the social media accounts analysed separately. The interviews were transcribed and anonymised, and subsequently circulated to any interviewee that responded positively to the offer of reading the transcript of their interview and requesting amendments as deemed appropriate.

Field notes were supported with photographs from the set, which focused on the development of the internal architecture that was formed and was taken towards the end of working days, when the sets were largely empty. Members of the company were not photographed during the build, as this would have run counter to the premises of this research. Anonymity within the interactive structure is an a priori condition set by the company for participants in the designed experience, i.e. all participants who participate in emergent

functions are required to wear masks during participation in the production, including the Black Masks (or front of house staff) and audience members. This excludes actors who, for the purpose of the interaction design and the delivery of a theatrical experience, can be said to wear masks of a different nature as they participate in character, performing actions that are choreographed rather than emergent. Adjustments of the choreography are iteratively devised during the build and run in response to observations made during the live performances, but iterations take place behind the scenes, as the movements of performers require complex coordination across time and space within the performance area. As one of the key questions investigated in this research concerned conditions for emergent behaviours, and approached the interaction design as a process that included ‘makers of meaning’ or participants in emergent narrative behaviours on both sides of the interface, I regarded it appropriate to preserve the anonymity of participants in the build, as well as the anonymity of participating audience members. Statements about, or from, public-facing interviews with key figures in the company, being performed in a less emergent role, are consequently not anonymised. The prominence of such members and their roles within the company would also make anonymisation ineffective, and this was addressed in the research ethics review. In those cases, permission were sought from those company members to use their name as necessary when presenting interview data, e.g. Sam Booth, who is an established actor with the company, Maxine Doyle, who is Co-Director of the company, and other senior members of the company who represent them in an official capacity in recorded media that is publicly available.

I collected social media data manually and using automated methods (detailed below), as practicable, for the analysis of fandom discourse that is discussed briefly in the introductory chapter, and anonymised the data as far as possible. This data is not part of the core analyses in chapters six to eight, but it contributes to my introductory discussions of subject-event relationships in screenic digital/proscenium theatre viewing regimes, compared to always-on/immersive participatory interaction, and the postdigital sublime. Sources include the Facebook group pages for the ‘Spoiler’ groups formed by and for aficionados of *The Drowned Man – A Hollywood Fable* and *Sleep No More*, and fan blogs on Tumblr and Wordpress. Secondary research was undertaken using library resources, academic journals in the fields of media and cultural studies, performance theory, and human-computer interaction, and interviews with company members and reviews of their work from online news sources, as detailed in the bibliography. Secondary research also included analysis of the academic report and filmed materials of the digital R&D collaboration between Punchdrunk and researchers at the MIT in Boston, Massachusetts (as detailed in the bibliography), supported by informal discussions with company members who were involved in the project.

Analyses were performed against the background of theories outlined in chapter two, with prominence given to the theories of de Certeau, Deleuze and the post-Cartesian posthuman

discourse. Using these theories, I analysed the interview material in two steps using discourse analysis, the first from a perspective informed by de Certeau's theory of space and place to investigate the relationship between licence and scheduling within the designed interactive space, and the embodied narrative practices that allowed spatial operations mediating between the two. This part of the analysis also included the responses of audiences to the experiences of licence and control, and the development of tactics in relation to the challenge presented by the situation, comprising both affordances and limitations. The outcome of this analysis of company and audience interviews is presented in chapter six, which focuses on experiential space (as defined by de Certeau) in Punchdrunk productions. References to space and place were identified in this analysis as registers describing extensions and licence vs. scheduling and mapping used by company and audience members in their descriptions of their experiences. These references were coded and mapped to four categories: space (for emergent and extensive practices), place (for ordering, mapping and scheduling practices), narrative negotiations – spatial operations (management of transitions between extension and ordering practices), and changing tactics (as an adaptive response to changing circumstances). The prevalence of each in interviews with audience vs. company members was calculated from queries of the data set performed using NVivo, and then compared in relation to the total to arrive at a proportional number. The second part of the discourse analysis was driven by textural and experiential descriptions concerned with embodied meaning-making within a storyworld or experience system, and is presented in chapters seven and eight for company members and audience participants, respectively. Descriptors of experience used by audience members in interviews were grouped according to meaning in context, as were descriptors for their actions within the space. From a list of the most common 1000 words at least three letters long, descriptors were extracted that signified their experiences. Common figures of speech, e.g. 'fine' and 'right', were removed from the sample, as were descriptors specific to features of the performance, e.g. 'black' referring to Black Masks rather than participant responses to low lighting, or 'bloody' referring to paint or stage blood. Descriptors identified as belonging to the same register were grouped, and predominance calculated as the percentage of the total number of descriptors included in the sample. The same process was applied to verbs and actions, with verbs used in generic additions to other verbs such as 'do', 'be', 'take', 'make', 'keep', 'come' (in their various forms), and generic activities such as 'stand' or 'sit' removed. The predominance of these descriptors was extracted using NVivo and calculated as a percentage, and the action descriptors were subsequently grouped and mapped against the experiential descriptors in order of prevalence. More detail about the categories used for the discourse analysis can be found in appendix 1.

The analysis of social media fandom discourse (not, as stated above, included in chapters six to eight, but undertaken to inform the introductory discussion of subject-event

relationships in different conditions of possibility) was primarily done with manual analysis, as there are no tools that at the time of this research that can export data from groups that are not open to the public. I trialled and abandoned NCapture, the Chrome extension of NVivo for gathering of online data, as it proved unreliable as a method to extract either Facebook or Tumblr data in a format allowing automated analysis. The fandom communities researched on Facebook primarily operated in ‘Spoiler’ groups that were shut down for further participation after the end of the performance run, so manual extraction emerged as the most productive method. An additional reason for manual selection was the need for contextual recognition of references to the two productions. As ‘Spoiler’ posts refer to a wide range of often relatively obscure references to symbols associated with *The Drowned Man* and *Sleep No More*, keyword-based selection would yield an inexact sample in terms of relevance to the criteria for selection (direct relevance to *The Drowned Man*, *Sleep No More* or the Punchdrunk meta-narrative). The criteria for inclusion in the sample were that the posts selected contained direct references to either *The Drowned Man* or *Sleep No More*, including references to symbols, storylines, or memories from these productions as well as games and other forms of artwork developed on the basis of such content, or to the meta-narrative of Punchdrunk as a company. Posts related to the promotion of work in a similar vein, but by other companies, were not included in the sample. Posts on topics related to the activities of Punchdrunk Enrichment were also excluded from the sample, as they discussed productions not directly included in this study that are normally directed at children or young people. Posts were included in the sample in full, anonymised and including the date of posting and the number of comments, to give an indication of how much engagement the post had from the community. The objective was to seek a measure of topics brought up for discussion, and a top-level engagement metric for these topics that distinguished between approval and participation. The content of comments to the posts that were extracted was thus not included, nor the number of likes, as they typically represent a lesser degree of engagement in the form of approval. Although the content of comment threads were not included, notes were made where the content of threads was of particular interest, for later reference. Tumblr blogs were selected based on a keyword search for ‘Punchdrunk’, ‘Sleep No More’ and ‘The Drowned Man’. For gathering of Tumblr blog data, I trialled import.io was to extract and export content data, and subsequently clean it up in Excel. However, as the total number of fan blogs included in the sample that was selected according to the criteria above counted 40 in total, I settled on manual analysis also of this sample, as it allowed the most accurate context-specificity.

Discourse analysis of the Facebook ‘Spoiler’ posts revealed a pseudo-religious register in which the majority of fan activities and reflections fell. Within this, five nodes were identified for coding; references to ritualistic practices relating to the communal, references to sacrifice either in the form of symbolic blood rites or offerings in homage to the object of

worship, references to omens in the form of the storyworld pervading on the real world, references to ephemerality and loss inspiring obsessive or worshipful behaviour, and references to the collection or acquisition of relics (i.e. items from the production in question). The pseudo-religious or cultish register that emerged from discourse analysis of the Facebook fandoms subsequently served as a background against which to analyse fan blogs on Tumblr. Many of fans active on Tumblr overlapped with fans active in the Facebook ‘Spoiler’ groups, and although the character of their Tumblr fan blogs differed from the way they presented themselves on Facebook in ways that are discussed in the introductory chapter of this thesis, this cross-platform presence of many members in both sectors of the online Punchdrunk fandom offered the opportunity to compare how the affordances offered by the two platforms shaped participation, and how malleable participation is, depending of conditions of possibility.

4.2 Research ethics

I did an ethical review of the research, consulting with supervisors and gaining the approval of the Science and Technology Cross-Schools Ethics Committee at the University of Sussex. I identified appropriate practices for working with human subjects and developed research plans following established research protocols specifying the anonymisation of participants in interviews, wherever company profile and position made it possible. Information sheets were written for the purpose of giving interview participants a background to the research conditions, and consent forms repeating the forms of data gathered and the conditions for participation were given to the interviewees, including the right to withdraw from participation at any time. Interviewees were informed about the anonymisation of their contributions, and offered the opportunity to read the transcript of their interviews for accuracy and in order to be confident that the information given in the interview could not compromise them in personal or professional ways. Any amendments to the interview material were requested before 31 December 2015 for practical purposes.

Due to the length of the interviews and the consequently large word count (the combined transcripts exceed 90,000 words), the interview transcripts were not included in the thesis, but have been made available in full on USB memory appended to all existing physical copies of the thesis, together with the NVivo coding files (nvpj) and aggregate values of the data in spreadsheet format (xlsx). All interview files are saved in rich text format (rtf) for ease of further analysis. Although it was not specified in the research ethics, the transcripts have not been published online due to the nature of the subject matter: specific and situated experience. In keeping with the ethnographic methodology used for this research, the interviewee accounts are provided and framed within the context in which they were given.

The ensuing chapters will explore the historical development of the immersive aesthetic and investigate meaning-making in Punchdrunk's interaction design by the company and their audiences through embodied narrative practice across blended materialities.

Chapter 5: A genealogy of the immersive aesthetic

This investigation of interactive system design focuses on the emergence of the immersive aesthetic in performing arts and discourses of the situated body in relation to events, regarded as a framework within which interaction design can be positioned. From modernism through postmodernism, performance and installation art joined literature and figurative arts in the exploration of technology through narrative themes of transformation and metamorphosis, shifting from machinic aesthetics and discontinuous narratives to questions of identity, complicity and agency within systems. As performance artists challenged grand narratives, they also challenged the Cartesian subject-event relationship through breaking the fourth wall and seeking to envelop the audience, and finally co-opting the audience as participants. Questions of audience agency and complicity have been central to this development, with the performance space moving from the proscenium stage to site-specific or blended spaces, inviting a discussion of the stage as interface, and vice versa.

In *The Interface Effect*, Galloway opens up the definition of interface to include the constructed environment in which we move physically, with thresholds and openings presenting points “of transition between different mediatic layers within any nested system” and their codes (Galloway, 2012: 31-33), and narratives emerging through the interaction with interfaces and the friction between their encoded layers. By extension, Galloway’s nested systems and the interfaces they present to us are not limited to the technological interfaces we have become accustomed to associating with the term: they include the urban and built environment, as well as older forms of technology such as theatre, books and movies. Of particular interest to this study are the interfaces constructed in the production of works of performing arts, as they allow for a focus on interaction design prior to, and leading up to, the development of computational coding of interaction across interfaces, as well as exemplifying embodied approaches to the making and parsing of nested systems of meaning.

Key to the selection of the performing arts as the object of study for research of interactive systems is their association with play, and the recognition of play as an adaptive or differential function within systems. Play, according to Galloway, locally smooths or manages the friction between the encoded mediatic layers of interfaces via our capacity for meaning-making:

Play is the thing that overcomes systemic contradiction but always via recourse to that special, ineffable thing that makes us most human. It is, as it were, *a melodrama of the rhizome* (Galloway, 2012: 29, original emphasis).

Galloway’s association of play with the rhizomic in this argument, i.e. as the human faculty that allows us to overcome systemic contradiction, emphasises the role of play as a form of local, de-centred and site-specific adaptive tactic to systemic contradictions, which introduces the

minor register and points to the role of minor tactics within systems as both yielding and distorting. The minor in this context is that which is subordinated to the transcendent measure, the “*supposedly universal model of Man*” and that which deviates, or differs, from expressions and representations that support normative centrality. In performing arts, the minor is expressed through non-conventional organisational forms that seek to distort and create variation (e.g. plot, choreography, language, staging, costumes, props) (Cull, 2012: 20, original emphasis). This chapter explores emergent expressions in theatre and performance as interface design in a minor scale, and its articulation and challenge of dominant structures of thought from 1900 to the present.

5.1 Disruption through subtraction and immersion

Superpositions opens with Deleuze’s essay on minor theatre, *Un Manifeste de Moins*, in which he discusses the subtractive operations performed by Carmelo Bene in the production of *Richard III*. To this effect, he underscores subtractive methods in theatre that strip and distort narratives, and defines the role of the theatre maker as an ‘operator;’ allowing for interpretations including the performance of functions (often technical) within a system and the operations of a surgeon:

L’homme de théâtre n’est plus auteur, acteur ou metteur en scène. C’est un opérateur. Par opération, il faut entendre le mouvement de la soustraction, de l’amputation, mais déjà recouvert par l’autre mouvement, qui fait naître et proliférer quelque chose d’inattendu, comme dans une prothèse: amputation de Roméo *et* développement gigantesque de Mercuzio, l’un dans l’autre. C’est un théâtre de précision chirurgicale (Bene and Deleuze, 1979: 89).

Subtractive, rather than additive, operations in a minor theatre make incisions into representational layers that support established systems of meaning. Some of these are obviously narrative, such as the stage décor, costume, and script, while other representational elements are found on a structural level, e.g. the relative coherence of narrative, the structure and organisation of the performance space, and the centrality or distribution of authorship. ‘Minor’ are those forms of expression that challenge established systems of meaning (Cull, 2012: 20), and often include distortion, discontinuity, and distribution of authorship and agency. The trajectory of experimental performance and theatre that breaks the fourth wall to envelop, compromise and immerse the audience forms part of the minor register, alongside another breakaway trajectory that challenges traditional forms of representation through subtraction and incision. Initially, acentric narratives and disruptive staging embraced absurdity and a futuristic aesthetic, and the earlier part of this history of the immersive aesthetic draws on the anti-realistic tendency in modernism, from symbolism through to Italian and Russian futurism, dada and pre-WWII German expressionism. These include early examples of anti-representational performance, the machinic aesthetic, Bertold Brecht’s *Verfremdungseffekt*, acentric narratives,

forms of theatre building on Antonin Artaud's vision of a total theatre, and the challenges of the proscenium stage that can be seen in early modernist and experimental theatre, in particular Max Reinhardt's 'theatre machines' and the introduction of theatre in the round and ambulatory audiences in Russian experimental theatre in the 1930s.

With postmodernism, theoretical perspectives and practice in experimental theatre and performance shifted towards immanence, defining the performance space as discursively constructed. Lyotard's discussion of the legitimisation of narrative knowledge through performance articulates developments in post-war European performance art and remains relevant to the discourse on systems narratives (Lyotard, 1984: 18-20), to which, in particular, later exponents of the immersive aesthetic in participatory performance theatre contribute. The more recent part of the history described is concerned with complicity, including the resurgence of the idea of transformation through ritualistic participation and the deprioritisation of central authorship, with agency at times extended to include audiences. Experimentation with the subject-event relationship and the situated body in a discursively structured performance space characterise the avant-garde through this period, often expressed through performance theatre, ritualistic performances, site-specific theatre, happenings, installations and live art.

The contemporary immersive aesthetic within the postmodern is approached via participatory theatre and performance, companies working with augmented reality and pervasive-immersive games, and performance theatre with emergent narratives. The work selected for this section emphasises questions of agency and complicity in formats drawing on first-person shooter games or funfair rides, or through the creation of augmented or blended realities as real-world extensions of game or storyworlds. Some companies presented, including Blast Theory, Agency of Coney and Punchdrunk, work directly with formats that articulate knowledge that is generated through performative systems, foregrounding the discursive construction of individual experience within such systems as a part of the sense-making process.

5.2 Antirealist modernism

Symbolism, a branch of late 19th century romanticism that came to inspire futurism, dadaism and surrealism, was a reaction to naturalism and realism that emphasised the subjective and sought to elicit states of mind and direct experiences of the sublime; an amalgamate of awe and terror that within the context of an aesthetic experience produces pleasure due to the suspension or not-happening of the perceived, imminent threat: the secondary privation of the soul being "deprived of the threat of being deprived of light, language, life" (Lyotard, 1991: 99). This definition of the sublime, as a deviation from, or even destruction of, totalising concepts of beauty, harmony or naturalised 'good sense' was key to the symbolist urge to articulate that which lies beyond such constructs; not from a position of critical distance, but from a yearning to break through or collapse the distance created by the hierarchic separation of mind and body.

Separating art from technically proficient representation forms the basis of antirealist modernism in art, whether expressed as aesthetic spiritualisation (e.g. symbolism) or abstraction. The symbolists, e.g. painters such as Puvis de Chavannes, Odilon Redon, Edward Munch and Pierre Bonnard, and poets Charles Baudelaire, Arthur Rimbaud, Paul Verlaine and Stéphane Mallarmé, formed the vantage point from which Alfred Jarry created his absurdist theatre and explored key themes of the “recesses of the soul”; the complexity of sexuality, and the nature of existence seen from an often highly subjective position (Bowness, 1972: 78-86). The symbolists distanced themselves both from traditional representation and allegorical rhetoric in keeping with the romantic sublime, and sought expression beyond conventional aesthetic means.

The search for expression beyond conventional aesthetic means presents a more persistent challenge in theatre and performance than it does in arts where abstraction of form is performed more readily: the physical presence of the actor problematises escape from the commodity form (Blau, 1992: 4). Abstraction, associated with the search for pure artistic expression beyond representation that characterised much of modern art, is compromised by the physical body of the actor, which is entangled with the hierarchy of visibility. The challenge and embodiment of presence and charisma therefore share the experimental stage with early 20th century theatre and performance devices for attempting to escape the conventional expression and commodity form of the physical body, including a deliberate lack of technical perfection, alienation of the audience and a machinic aesthetic.

The opening performance of *Ubu Roi* in 1896 was to be one of only two, as the vigorous criticism the play received prompted the director of Théâtre de l’Oeuvre, Aurélien Lugné Poe, to close the production after two performances. Jarry, whose *Ubu Roi* is regarded by some as the beginning of experimental theatre, was embedded in the Parisian symbolist circles or artists and writers with roots in the humourist groups and artistic cabarets of Montmartre in the 1880s and 1890s (Dubbelboer, 2012: 41-45). *Ubu Roi* was produced and staged with disregard for theatrical convention, lacking a coherent plot and believable characters. The play opened with the word *merdre!* and satirised in concurrent parallel narratives the stupidity, vulgarity, cruelty and greed of modern man.

Filippo Tommaso Marinetti, with references to Jarry, presented *Roi Bombance* at Théâtre de l’Oeuvre in 1909, two months after publishing his first futurist manifesto. The futurist vision for theatre, like Artaud’s would later, excelled in manifestos more than in realised performances, but futurist evening gatherings presented provocative cabaret or variety style theatre that expressed the spirit in which these manifestos were written. Marinetti admired the striving in variety theatre for novelty rather than narrative depth, and preferred the more active and irreverent role of the cabaret audiences: he was inspired by variety theatre to proclaim the purpose of futurist theatre being to “destroy the Solemn, the Sacred, the Serious, and the

Sublime in Art with a capital A” (Goldberg, 2011: 17). Key features of futurist theatre were the use of atonal sounds, nonsense text and mechanical physical movement: at the time provocative attempts at machinic performance, which resulted in many evenings being rounded off by a barrage of vegetables thrown at the stage, and/or arrests (Goldberg, 2011: 16).

In Moscow, Vladimir Mayakovski, David Burlyuk, Velemir Khlebnikov, Aleksey Kruchenykh and Vasily Kamensky formed an artists’ collective under the name *Hylaea* from 1911-1912 around their avant-garde café theatre, where they presented tragedies and operas sharing some of the characteristics of the Italian futurists. Other futurist groups formed in Moscow, St Petersburg and Kiev, but *Hylaea* is widely regarded as the most influential. The members of the group soon took their theatre outside the performance space, seeking to extend the theatricality of their work beyond the confines of the stage. An affinity for the circus, and a Cubist, non-objective aesthetic characterised Kruchenykh’s futurist opera *Victory Over the Sun* and Mayakovski’s tragedy *Vladimir Mayakovski*, both created in 1913. The two productions ran simultaneously, and sought to integrate not just set, costume, actor and gesture, but also promoted a disintegration of the boundary between stage and auditorium through spectator participation (Goldberg, 2011: 34-38). Their activities off-stage included public appearances in outlandish outfits, poetry readings in the streets, and assaults on members of the public, reflecting the title of their manifesto *A Slap in the Face of Public Taste* (published in 1913), and foreshadowed much later transmedial experiments, including pervasive and alternate reality games. Vsevolod Meyerhold, who, like Jarry, began his career in a symbolist vein, was inspired by Konstantin Stanislavski and produced several of Mayakovski’s works for the stage. Meyerhold experimented with circus-like effects on stage and formulated a method of acting he termed ‘biomechanics’ that deprioritised the spoken word and which has influenced much of later developments in physical theatre. His biomechanical method challenged Stanislavski’s focus on the psychological processes of the actor, as well as traditional forms of representation relying on spoken language and illusion.

At Cabaret Voltaire in Zurich, the birthplace of dada, Tristan Tzara, Hugo Ball, Sophie Taeuber-Arp and Jean Arp staged cabaret events between 1915 and 1917 featuring dance, puppeteering, music and poetry in early experiments with transmedial performance. Like the Russian futurists, they soon decided to take performance beyond the cabaret stage, and did so with the Dada-Season of 1921 (Bishop, 2012: 66). The desire to break down the boundary between stage and auditorium that was expressed in futurist cabaret and theatre developed in the 1920s in two strands that have continued relevance for participatory art and performance: one seeking to disrupt and provoke, the other to ameliorate and celebrate collective creativity. Common to both are the desire to emancipate, empower and activate the participating subject through physical or symbolic enactment. The result in both cases presents a challenge to authorship as a hierarchic principle through a collaborative approach to the creative process and

the assumption of collective responsibility. The latter is relevant to the perceived state of alienation, persistent within avant-garde art, to which collective responsibility is seen as the remedy through a “restoration of the social bond through a collaborative elaboration of meaning” (Bishop, 2006: 11-12). To such ends Nikolai Evreinov, who shared his background in symbolism with Meyerhold, staged the mass spectacle *The Storming of the Winter Palace* in 1920 in Saint Petersburg. The performance dramatised, in ritualised form, its historical counterpart during the October Revolution and involved 2,500 performers and military vehicles in a mass scale in situ re-enactment of the events between the February Revolution and the storming of the Winter Palace in 1917.

The Dada-Season of 1921 in Paris programmed art events intended to actively engage the public. The St. Julien le Pauvre excursion, which, according to André Breton (a speaker at the event), drew over 100 participants, was part of a series of art events that intended to attract visitors to “places that have no reason to exist.” Breton, who shortly after coined the phrase “artificial hells” to describe the wave of dada events that had moved from the cabaret stages to the streets, found the spectators’ willingness to participate in the “dada game” evidence of failure, and subsequently started rethinking the dada strategy of provocation through scandal (Bishop, 2012: 67-70). Later that year, Breton’s ascendance as leader of the dada movement culminated in the Barrès Trial, a mock trial of the symbolist novelist Auguste-Maurice Barrès which marked a shift away from the “anarchic provocation” of dada toward a more intellectual approach that would develop into the surrealist movement (Bishop, 2012: 73).

Jarry’s work inspired the foundation of *Theatre Alfred Jarry* in Paris in 1926 by Artaud, Roger Vitrac and Robert Aron (Artaud, 1976: 610). Artaud’s vision of theatre drew on surrealism and the absurdist writing of Jarry, and sought to shock the spectator out of complacency by removing aesthetic distance and inciting chaos (Jamieson, 2007: 21-22): placing the audience in the middle of the spectacle, and using incantations, guttural utterances and screams, pulsating light and disorientating scale so that they would be “engulfed and physically affected.” (Banes, 1993: 115). Artaud attempted to integrate the text and the body, and sought to create a theatre where representation was compromised by direct, unmediated experience, dissolving the barriers between audience and actors: a theatre that “summons the totality of existence and no longer tolerates either the incidence of interpretation or the distinction between actor and author” (Derrida, 2001: 232-235).

In his discussion of the Theatre of Cruelty, Derrida called the traditional stage theological: “dominated by speech” with an “author-creator” who controls what is represented to “a passive, seated public, a public of spectators, of consumers” (Derrida, 2001: 297). Unlike traditionally seated theatre, where the audience role is passive and receiving, experimental theatre tends to position spectators in a different relation to textual and spatio-temporal aspects of the narrative, often bringing theatre into venues and arenas, including public spaces, which

do not have a proscenium stage. Boundaries are challenged also between disciplines (e.g. actors, dancers, singers), questioning the hierarchy of traditional theatre making, with actors often contributing more actively to the devising of the play. Artaud intended to write for a theatre that was not based on speech, but on physicality and a “language of sounds, cries, lights, onomatopoeia”; a “language in space” (Derrida, 2001: 303): formative in becoming. Themes of absurdity, dream states and hybridity were central to both dadaism and surrealism, and have continued to influence antirealist experimental theatre.

Reinhardt and the Deutsches Theater produced *Das Mirakel* (written by Vollmoeller) in 1911, which sought to embody the *Gesamtkunstwerk*: the Wagnerian vision of a total theatre. The production toured Europe and incorporated more than 2,000 actors, dancers/performers and stage technicians, and used stage machinery, music and lighting, but no dramatic dialogue. The production played before nightly audiences of 8,000, and received widespread critical acclaim. Together with Reinhardt’s other works, such as *Jedermann* (performed in Salzburg cathedral square) and *Faust* (staged on a mountainside near Salzburg), *Das Mirakel* “transformed stage technology” (Roose-Evans, 1996: 65). The stage production of *Das Mirakel* was followed in 1912 by two feature films based on the Vollmoeller play; one authorised by Reinhardt that featured the original cast (produced by Joseph Menchen), and one unauthorised version (produced by Continental-Kunstfilm). Both films were promoted on the back of the success of Reinhardt’s production, with the Menchen production marketed as a filmatisation of the original play, allowing audiences to see more of the detail of the performance and thus positioning the movie as a transmedial development of the theatre play.

In 1917 Erik Satie, Pablo Picasso, Jean Cocteau and Léonide Massine (of Diaghilev’s Ballet Russe) collaborated in the production of *Parade*, a ballet that employed Jarry-like devices and which sought to embody the change in public sentiment immediately after WWI that Guillaume Apollinaire defined in his 1918 manifesto *L’Esprit nouveau et les Poetes*. Apollinaire’s manifesto was based on a lecture he delivered in Paris in 1917, and proclaimed a renewal of art and cultural life that embraced modern technology and liberated poetry from the burden of representation and repetition. Apollinaire was keenly aware of the possibilities created by new technology (in addition to cinema, the radio, the telephone, and the phonograph) to open the field for a ‘synthetic’ theatre art, combining poetry, music and movement, and he called for artists to eschew aestheticism and formulae, and embrace “sublime novelty” or be left to the forms of pastiche, satire or lamentation (Apollinaire, 1918: 385-396). *Parade* incorporated influences from popular culture (notably silent movies), fairgrounds and the music hall tradition, for which everyday materials were used to produce costumes (stiff cardboard) and sound (empty bottles, typewriters), forcing the dancers to move in a machinic fashion outside the ballet form that remained the foundation of formal dance training throughout the 19th and 20th centuries.

The Reinhardt disciple Erwin Piscator further evolved the use of stage machinery from 1919 at the *Volksbühne* in Berlin, where he worked with Brecht to develop epic theatre. Brecht created what he termed *Verfremdungseffekt* or purposeful alienation of the audience through dramatic devices that disrupted the illusion of representation, including breaking the fourth wall and addressing the audience directly from the stage. Piscator wanted to create epic techniques and stage technology to amplify his political vision: his ideal was a “theatre machine” with “hoists, cranes, practicable traversing platforms with which weights of several tons could be shifted around the stage at the press of a button” (Roose-Evans, 1996: 66-67). In the 1920s, Piscator introduced still and moving image projections to augment his theatre productions in addition to his use of theatre machinery to extend and expand the stage.

Collectively created under the artistic leadership of Oskar Schlemmer, the Bauhaus collective in Germany produced experimental theatre in the 1920s that represented an authored, classicist-modernist aesthetic, and pointed in its sophistication and formalism toward the much later work of Robert Wilson. The more anarchic expression of the dadaists and surrealists was formalised and brought together under a coherent vision; still celebrating modernity and mechanisation and striving for a synthesis of art and technology, but expressing a more refined and expertly executed modernist aesthetic. Schlemmer’s students used music, lighting, innovative costumes and sets, and acting inspired by dance rather than the spoken text in productions, guided by Schlemmer’s theory of performance: a modernist aesthetic, positioned within an intellectual framework placing more emphasis on structure and purity of expression than the dadaist and surrealist movements. The introduction of classicist principles in Schlemmer’s work is reflected by his use of the Apollonian and Dionysian dichotomy to express the tension between control and abandon in his method and aesthetic (Goldberg, 2011: 97-103). Nietzsche’s account of the Apollonian and Dionysian describes Apollo as the ruler of form, brightness, and individuation, and Dionysus as the god of rapture, ecstasy and intoxicated “obliteration of self.” Nietzsche regarded the two principles as primary influences on ancient Greek tragedy, alternating in dominance until they, according to Nietzsche, fused in the tragedies of Aeschylus and Sophocles (Nietzsche, 1993: 14-27). The tension between the Dionysian and the Apollonian in experimental theatre continued to play out during the 20th century through expressions of minimalist restraint and ritualistic abandon, and came to serve the challenge of rationalism that prevailed in postmodernist theatre through different approaches to expressions of ‘minor’ theatre based on subtractions and transgressions.

Schlemmer remained at Bauhaus until 1929, when increasing political tensions caused him to leave the school. Bauhaus remained open until 1933, when it finally closed under pressure from Hitler’s new government. The same year, Piscator, Reinhardt, Brecht, and many other artists left Germany, and Schlemmer, who at that point was professor at the United State School for Applied and Fine Art in Berlin, was forced to resign. In 1937, in a discussion of

rationalism and its causes against the background of political developments in Europe in his German diary, playwright Samuel Beckett wrote: “Rationalism is the last form of animism. Whereas the pure incoherence of times and men and places is at least amusing.” (Knowlson, 1996: 228). This sentiment, challenging the liberal humanist structure of thought that could not prevent the eruption of two world wars in Europe, came to define post-war experimental European performance art together with Artaud’s *Theatre of Cruelty*, which was published in 1938.

At the point in time when *Theatre of Cruelty* was published, theatre makers were already working with unconventional staging and audiences that were activated as participants, playing active parts in both the narrative and the physical composition of narrative. In 1935, Nikolay Okhlopkov, who was strongly influenced by Meyerhold, started experimenting with theatre in the round at the Realistic Theatre in Moscow, where he was appointed director in 1930 (Roose-Evans, 1996: 78). By operating several stages, he was able to stage and cut between several scenes, breaking away from linear presentation of the narrative. A contemporary account by the British actor and director André van Gysegheem of Okhlopkov’s production *The Iron Flood* describes audiences being invited an auditorium where actors were already acting on uneven, rocky banks built up to 5’ in a long hall. During the performance the audience was made part of the narrative in a scene when they were suddenly identified by the actors as comrades, believed lost in hostile country (Roose-Evans, 1996: 79-81). Influenced by Artaud’s work, The Living Theatre was founded in New York in 1947. Their early work included stage productions of European modernists Brecht and Cocteau, and they continued to experiment with unusual performance spaces and a non-conformist expression that in part shared the Beat aesthetic, challenging in particular grand narratives of patriotism and war. *Theatre of Cruelty*, with its emphasis on a theatre beyond words, served as a bridge between inter-war and post-war experimental theatre in Europe. It informed The Theatre of the Absurd, which emerged in the 1950s from a distrust of language as a means of communication, embracing bewilderment and confusion. Primarily literary, the movement included Beckett, Tom Stoppard, Eugène Ionesco, Jean Genet, and Harold Pinter; a group of playwrights whose work was influenced by Jarry’s pataphysics, dada, Artaud’s *Theatre of Cruelty*, and silent movies. The playwrights of Theatre of the Absurd, as well as their contemporaries in the Art Informel movement in figurative arts, articulated the prevailing zeitgeist in the post-WWII period in European art: existentialist, absurdist, questioning, and broken.

5.3 Complicity and participation

Experimentation with the extension and alteration of the physical performance space gathered pace again in Europe in the 1960s and 1970s, when theatre makers including Luca Ronconi, Ariane Mnouchkine, and Richard Schechner experimented with multiple, enveloping, shifting

and fluidly boundaried stages. In 1969, Ronconi produced *Orlando Furioso*, a play in which the audience were not allowed to see the full picture or follow a linear narrative, and instead could move around to piece together the story from a series of isolated scenes played by actors on wooden floats, sometimes collaborating to physically move the platforms on which the fragmented scenes were played out.

Like modernist art and theatre of the early decades of the 20th century, participatory performance and art juxtaposes the idea of audience agency with the idea of the passively consuming spectator, iterating a narrative that traverses the modern and the postmodern: the desire to emancipate the audience from alienation, consumerism and totalitarian social order (Bishop, 2012: 275). Modernist and postmodernist aesthetics can be suggestively positioned in tandem with the two main tendencies (often coinciding) within participatory and live art: gestures intended to generate social impact, and gestures that mirror and redouble alienation. Responses to war and emerging media technologies in experimental performance and participatory art during the latter part of the 20th century often resulted in an anti-art stance, embracing new forms of play and articulating a rejection of central authorship, both on and off stage, through pervasive forms of performance theatre and games. A discursive performance space can impose or superimpose itself on its context, rather than being bound by the conventions of the traditional stage; a format utilised by performance artists and media art practitioners in both internal and external spaces. The Social Turn in live art from the 1990s onward grew from reference points in the theories of Debord, de Certeau, the Situationist International, Deleuze and Guattari, Hakim Bey and others, and produces art, often dematerialised and anti-market in tone, that reaffirms collectivism and offers a counterculture of social unity. Unlike early 20th century avant-garde art, which tended to be associated with centralised political and ideological entities, contemporary social practice reflects the “de-centered and heterogeneous net that composes post-Fordist social co-operation” (Bishop, 2012: 12). De-centred social practice often produces work around utopian themes of collective desires, turning away from neoliberal individualism and its implications for the fetishised artist and single authorship. While utopian and collaborative, performance art in this vein often includes tension and confrontation and invites the possibility of failure, developing strategies and aesthetics on the cusp of failure that involve a challenged, even compromised, audience.

Two important experimental theatre companies, Elevator Repair Service and Forced Entertainment, foreground the failure of theatrical representation in their work and explore the potential of that failure as a poetic element. Relevant to Deleuze’s definition of the minor (Cull, 2013: 20), failure is here articulated in relation to the transcendent rationality construct, and is not only a critique of its regime, but also a starting point for emergent expression. Similarly, an analysis based on de Certeau’s theory of space and place positions the work of Elevator Repair Company and Forced Entertainment as disruptive to the order of place, and thus as spatial

operations that expand potentiality. Elevator Repair Service, founded as a company in 1991, also incorporates elements of popular or ‘low’ art in the vein of early modernist theatre; ensemble dancing and slapstick inspired by musicals, 1930s movies and cartoons (which often included parodies of ‘serious’ drama), unusual interpretations of scripts and choreography (Bailes, 2011: 160-161). Many of their productions work with themes of social awkwardness and communication difficulties, making the live audience complicit as witnesses to failure within both the social and theatrical frames of expectations. Ensemble dance numbers punctuate communication failure, and serve as an absurdist commentary on the stage and screen musical tradition as well as theatrical hierarchies through the incorporation of mundane gestures and movements (Bailes, 2011: 154). In the UK, Forced Entertainment have worked since 1984 (Forced Entertainment, 2015) with an anti-heroic, broken aesthetic that expresses the failure of both theatrical continuity and the coherence of human society. Phelan positioned the work of Forced Entertainment, which occupies a territory between experimental theatre and live art, in the extended context of the “collapsed world,” echoing Art Informel: the artistic voice of society-wide existentialist crisis in the wake of war that could still be felt in Thatcher’s Britain in the 1980s, particularly in northern towns like Sheffield, where the company is based (Bailes, 2011: 66).

In 1958, Guy Debord published *Theory of the Dérive*, which outlined the situationist practice of ‘drift’ in which the participant adopted ways of moving within the urban landscape unrelated to aims associated with work or travelling from one location to another in efficient or planned ways. Dérive as practice is immanent in its essence, but also constitutes a form of blended reality in which an alternative embodied discourse is superimposed on the existing order of the city. The Situationists International were influenced by dada and surrealism via lettrism, a post-war art movement that, in common with contemporaries in The Theatre of the Absurd, challenged conventional meaning; in particular meaning carried by written language. The SI exploration of games and the practice of dérive as a form of social art activist practice have had an enduring influence on counterculture, participatory art and pervasive game design in the subsequent decades. Further examples of playful performative practices that were broadly contemporary with the SI include Fluxus and the New Games Movement. The art collective Fluxus included performance artists Wolf Vostell, Joseph Beuys, Al Hansen, Nam June Paik and Yoko Ono, and pioneered an anti-art, neo-dada aesthetic, blending live performance, video, spoken word, installation art and music in transmedial happenings. The New Games Movement emerged from 1960s American counter-culture as a reaction to the Cold War mentality and the Vietnam War, and developed participatory public games that were intended to encourage ‘minor’ behaviours; non-aggressive and non-competitive (Montola, Stenros and Waern, 2009: 55-56). Their activities included the purchase of a 14-acre farm to establish the Games Preserve in 1971, a retreat where participants could study play through practice.

While associated with the Viennese Actionists, performance and media artist Valie EXPORT's early work with 'Expanded Cinema' incorporated technology in performance and extended the performance space beyond the screen. Export's *Touch Cinema* (1968) emphasised the voyeuristic relationship to the female body in cinema and wider contemporary mass media culture through public performance. Passers-by were invited to touch her breasts by putting their hands through the curtained 'screen' of the cardboard TV that she was wearing strapped to the front of her torso. The artist called this "the first genuine women's film," as she was in control of the display of the female body within it (Mueller, 1994: 15-18). Export uses reflection on several levels in her work, moving between the mediated and the physical body. In *Ping Pong* from 1968, she critiqued the passive immersion offered by the traditional cinema environment: an actor representing the audience performed in front of a screen, equipped with a ping pong bat and ball. The screen displayed dots, appearing and disappearing, as targets for the actor to try and hit (Mueller, 1994: 9). While at the time the film and performance was acclaimed as a political statement on the reactive role of the conventional cinema audience, developments in digital media decades later suggest further layers of interpretation, including questions regarding the enactive rhetoric of video games.

The deconstruction of theatrical convention and distinctions between elements of popular and 'high' culture cuts across 20th century avant-garde theatre and art, with the inclusion of motifs from variety and cabaret theatre, movies, fairgrounds and the circus, and later, TV and computer games. While the modernist sensibility is driven by centralistic visions, the postmodernist aesthetic takes a fragmented and pluralistic perspective that suggests the possibility of concurrent unscripted interpretations (Fisher-Lichte, 2008: 147-148). Pervasive games in the U.S. adopted a transmedial aesthetic from the mid-1960s, where mediated storyworlds were extended through live action role-playing, which in turn was sometimes remediated. The movie *La Decima Vittima* from 1965 spawned a trend for live action assassination games on U.S. university campuses. This subsequently formed the subject of an episode of the TV series *The Saint* called *The Death Game*, extending the practice further (Montola, Stenros and Waern, 2009: 67). Assassination games became a popular genre for live action role-playing games (LARPs), which developed from the early 1980s in games communities that started to perform their characters physically (Montola, Stenros and Waern, 2009: 64). LARPs form around storyworlds in books or games, and are typically enacted as superimposed realities that can play out over several days or weeks (Montola, Stenros and Waern, 2009: 36-37).

In 1971, Ronconi produced *XX*, a theatre performance in a two-storey building with twenty rooms, ten on each floor, in which the spectators, divided into two groups, watched fragmented scenes depicting the arrest and interrogation of a revolutionary threatening a fascist regime. Critics at the time accused Ronconi of celebrating fascism, to which he responded that

it was more important to “plunge the spectator [...] into the confusion of all conditions that could, at present, make fascism possible” (Roose-Evans, 1996: 81-83). Mnouchkine, founder of Theatre du Soleil in 1964, staged *1789* in 1970 on a circle of stages surrounding the spectators, simultaneously presenting scenes from the French Revolution in a way that challenged the canonical interpretation of the events and outcome of the historical period. The play lasted two and a half hours without interval, and instead of focusing on prominent historical figures attempted to show the French Revolution from the perspective of the common people, and not as the linear account presented in history books. At the storming of the Bastille, the actors invaded the auditorium, accosting the audience as if they were an actual mob witnessing the event (Roose-Evans, 1996: 86).

Augusto Boal published *Theatre of the Oppressed* in 1973, and introduced interactive methods intended to turn audiences into ‘spect-actors’ through confrontational practical training and participatory theatre. Boal’s methods, developed and expanded since the publication of *Theatre of the Oppressed*, include forum theatre, invisible theatre and legislative theatre, and seek to generate change not through engendering emotional responses to his work, but through enactment of semi-staged conflict: a rehearsal of revolution. Boal wanted the theatre, whether it took place in the political, therapeutic, pedagogic or legislative contexts he worked with through his career, to leave a sense of unease through lack of resolution, stimulating the ‘spect-actors’ to seek resolution in real life: “I don’t want the people to use the theatre as a way of not doing in life” (Bishop, 2012: 122-125). Boal’s work with rituals and masks brings light to the ideological culture of a society that is articulated and maintained by social interaction patterns by asking actors to enact the roles of participants in cultural rituals, for example confession according to Catholic rites. By changing their vantage point within those roles according to class and relative status throughout the performance, the actors embody the tension between ritual role and socio-economic background: simultaneously highlighting ideological superstructure and the power relationships within society (Wardrip-Fruin and Montfort, 2003: 351-352).

Ronconi, Mnouchkine and Boal involved the participants in the proceedings of performance within more or less controlled physical environments where the boundary between stage and auditorium was ambiguous or erased. Taking this approach a step further, Fiona Templeton adopted a method influenced by live action role play in the production *You – The City* (1988), where one audience member at a time was taken on a two-hour journey through intimate and public spaces in New York, after introducing themselves to the doorman at One Times Square with the words “I’m looking for you.” The production involved a cast of 15, including the driver of a cab into which the participating audience member was pushed during the performance (Montola, Stenros and Waern, 2009: 59). In the UK, Blast Theory began creating multimedia experiences in 1991. They initially focused on participatory installation

performances, but turned to more extreme forms of audience participation that articulated questions around agency in 1997, when they began working on *Kidnap*, which premiered in 1998. For this production, two members of the audience were kidnapped, and the ensuing events were streamed on an online platform. A year later, they began working with the Mixed Reality Lab to create *Desert Rain*, a game and installation performance using virtual reality. The company has remained prolific, and has since their inception produced *Can You See Me Now?* (a chase game taking place in the streets using handheld computers) in 2001, *Rider Spoke* (a street game for cyclists using handlebar-mounted computers) in 2007, *A Machine To See With* in 2010, *Karen* in 2015, and *Operation Black Antler* in 2016. *A Machine To See With* is a participatory mystery game communicated to you via messages sent to your mobile phone that instructs you to seek specific locations and eventually get into a car parked in a garage together with a stranger (another participant in the game), with whom you eventually perform a run on a real bank with the intent to rob it. In 2015 they released an app, *Karen*, a story that unfolds as an intimate dialogue between you and your life coach, Karen, who features on interactive video. Karen gathers personal information about you during the unfolding of the story, and can at times be intrusive, through both push notifications and the nature of her questions. With *Karen*, Blast Theory shifted the performance space from the shared urban space to the psychological and personal space that is mediated by smartphones and shared with computational processes that gather and analyse user data (Blast Theory, 2015).

5.4 Blended spaces and delinquent stories

Contemporary site-specific performance that places the participant within the work and also aims to give audiences an experience of being fully psychologically involved and sensorial enveloped, often to the point of being near-overpowered, is often called immersive. The means to achieve the psychological and sensory sense of immersion include audience participation, sometimes making audiences instrumental to the performance; surround sets that envelop the audience; the use of sound, lighting and projection to amplify visceral experience within the performance space; transmedial narratives and blended realities; and performance spaces that extend across or are supported by digital platforms, e.g. social media, blogs, and geolocate devices (Machon, 2013: 35-36). Themes of transformation via the situated body have been explored throughout the history of experimental theatre, from both the vantage point of the formal stage and from participatory art intervention practices, in the post-WWII period often drawing on Artaud. Contemporary expressions in this genre includes performance work that is inspired by computer games in terms of content, aesthetic, narrative or spatial development, e.g. Slingshot's live action zombie performance game *2.8 Hrs Later* (2010), Punchdrunk's *Sleep No More* (2011) and *The Drowned Man* (2013); work consisting of audience participation in blended realities supported by digital platforms, e.g. Blast Theory's *Can You See Me Now?*

(2001), *Rider Spoke* (2007), *A Machine To See With* (2010) and *Karen* (2015); site-responsive work where the audience participation primarily consists of ambulation to connect the different part of the performance and performance installations, e.g. DreamThinkSpeak's *Before I Sleep* (2010), *The Rest is Silence* (2012) and *Absent* (2015); and work where audiences perform 'algorithmic' functions, e.g. Agency of Coney's *A Small Town Anywhere* (2009) and *Codename: REMOTE* (2014). Arguably, the immersive genre also includes fandoms comprising transmedial fan fiction, and role-play across physical and digital platforms, where the 'world' enacted and extended by participants may have its origin in print, movies, computer games or web comics.

Ilya Kabakov and Char Davies (*Osmose*) used the term immersive in the 1990s to describe "the totality of audience experience" (Machon, 2013: 28) and, like the work inspired by the Wagnerian vision of the *Gesamtkunstwerk* referred to earlier in this chapter, the aesthetic that has emerged in this genre is fundamentally interdisciplinary and includes architecture, sound, lighting, projection, digital technologies, choreography and installation art (Machon, 2013: 35). Although not performing live in the West, Ilya Kabakov, who calls his spectators 'actors,' created immersive walk-through installations from the late 1980s and throughout the 1990s where the spectator, through ambulation within the installation rooms, experiences the absences of their fictive inhabitants (Machon, 2013: 33). While still working in the USSR, Kabakov created his *Albums* (1972-1975); illustrated narratives issuing from a fictional character who in order to embellish his own life created alternative identities that for the most part were lonely characters on the margins of society. (Bishop, 2012: 153). The artist called these works 'domestic theatre' and started realising them as fully physically immersive installations after emigrating in 1987 from the USSR to Europe and subsequently the United States. Canadian artist Davies, combining influences from her fine art painting and scuba diving, created the virtual reality installation environments *Osmose* (1995) and *Ephémère* (1998), where the participant (or 'immersant' in Davies' words) wears a head-mounted VR display. In *Osmose*, navigation within the virtual reality was performed through controlled breathing and leaning; the participant could rise within the world by breathing in, and control the direction in which they travelled through leaning. The virtual reality in which the participant was immersed thus integrated proprioceptive experience with visuals that drew on Davies' painterly aesthetic, and three-dimensional sound composed from samplings of human voices (Davies, 2012).

In 1995, Robert Wilson created the Artangel-produced *H.G.* together with Hans Peter Kuhn, a work that positioned the audience member as the central performer and agent within the production. *H.G.* was an immersive theatrical installation in Clink Street Vaults, situated underneath the ruins of the Clink, a mediaeval prison in London. *H.G.*, which had a direct influence on the later work of Punchdrunk, was a series of 20 underground rooms in which

intricate installations were created as if recently deserted; a theatrical space in which the spectator's walking through the space was a central metaphor (Hess-Luttich, Muller & Zoest, 1998: 224-230). Wilson is best known for his work in theatre, opera, dance and theatre design, and operates a range of strategies to question language in his work, including silence, disjunction between visuals and text, discontinuity and decontextualisation to dramatise the gaps between visual and verbal representation, and question the control that language exerts over what is knowable.

As outlined in this chapter, key elements of the genre have featured within experimental theatre and live art throughout the 20th century. Artaud's influence is often explicit, and the participatory elements of the genre and the associated transformational aspirations can be seen as a continuation of Boal's work with ritualistic participatory theatre, as well as drawing on situationism and practices of performances artists such as Ono and Beuys. Concurrent and discontinuous narratives draw on the fragmentation of narrative presentation that has been explored since *Ubu Roi* premiered in 1896: by Okhlopkov in the 1930s, Mnouchkine and Ronconi from the 1960s, and Wilson from 1970s to the present. The extension of the performance space to address and finally include the audience has developed from Brecht's breaking of the fourth wall to Ronconi's involvement of the audience in the composition of the performance space and the immersive installations of Kabakov, Wilson and Davies. Blended realities have featured in experimental performance practices since the first decades of the 20th century, with Russian futurist street art, dada public performances, situationist art interventions, New Games Movement and LARPs superimposing storyworld on quotidian reality. Taken together, these practices articulate the ongoing challenge of transcendence and the Cartesian subject-event relationship that runs through experimental performance art, often incorporating forms of popular art, and which informs the contemporary immersive aesthetic.

The critique of Cartesian sense is at heart a critique of the discursive constructs that allow for the creation of externalities, and the trajectory from breaking the fourth wall to the immersive aesthetic in performance art has often served to challenge the transcendent subject-event relationship. Performance artists who address and investigate the idea of externalities more specifically include Elmgreen & Dragset and Punchdrunk. Elmgreen & Dragset's work includes *Try* from 1997, where the artists hired non-professionals (neither professional artists or performers) to realise the artwork by enacting the artwork in the gallery, and their *Reg[u]arding the Guards* from 2005, where unemployed people were hired to act as invigilators in the gallery (Bishop, 2012: 220). Elmgreen & Dragset's later work include *Tomorrow* at the V&A in London in 2013: an entire apartment created for an imaginary architect, where the performance had been delegated to visitors to the museum with the exception of one invigilator. The work of Elmgreen & Dragset and *La Monnaie Vivante* (2006-2010), an itinerant exhibition curated by Pierre Bal-Blanc, reflect the self-exploitation within late capitalism that underpins network-

based production and affective labour (Bishop, 2012: 277), and which has expanded in tandem with interactive internet technologies. *La Monnaie Vivante*, presented multiple “delegated performances” in Paris, London, Warsaw and Berlin, in a single space and time, shared with visitors to the venues. At Tate Modern in 2008, performances took place on the Turbine Hall Bridge, including horse-mounted policemen demonstrating audience control techniques on the visitors while dancers were performing an independent routine among them (Bishop, 2012: 232-233). The title of the exhibition *La Monnaie Vivante* was inspired by Klossowski’s book with the same name, positioning humans as “living currency” and money as the mediator between “libidinal pleasure and the industrial/institutional world of normative imposition” (Bishop, 2012: 234). The *La Monnaie Vivante* exhibition sought to foreground ‘interpassivity’ (as opposed to interactivity) as the normative state promoted by mass media and commodity culture, by juxtapositioning passive entertainment imposed by such institutions and the perceived perversity of artworks that demonstrably deviate from the norm.

Self-exploitation within commodity culture is one of the key themes of *The Drowned Man – a Hollywood fable* by Punchdrunk, further emphasised by the onus on audiences to actively pursue sense-making. While not aesthetically explicit but revealed through the structure of physical participation, Punchdrunk’s work draws on of digital culture. Felix Barratt, Artistic Director of Punchdrunk, discusses their work as a theatre counterpart to computer games (McMullan, 2014), in particular first-person shooter games, and games where the player is required to solve a puzzle in situations where the narrative is never explicit, and made evident primarily through conspicuous absences. In Punchdrunk’s work, the absences include a central narrative: the participant is invited to a compelling quest for a sense that may not exist, and which can only be constructed through the work of the participant. The possibility that there is no sense-making presence ‘outside’ the system leads the player to enact the critique of transcendence that runs through postmodernist experimental performance.

In *A Small Town Anywhere* (2009), Agency of Coney devised a participatory production driven by a “games engine” consisting of the audience, positioned as inhabitants of a small town on the verge of social collapse, and given a set of objectives (McMullan, 2014). In comparison with the rules of a computer game, scenes were allowed to develop with greater improvisational freedom, consequently resulting in uncertain outcomes. Coney’s introduction of their production *Codename: REMOTE* (2014) says: “Imagine you’re in a theatre of the future, powered by an algorithm. “We’re here to help you be more like people like you. And we know that people like you like choice”.” (Coneyhq.org, 2014). *Codename: REMOTE* elucidates the semblance of individual freedom offered by interactivity and personalisation, masking the deeper homogenisation of contemporary culture through demographic data harvesting, algorithmic profiling, and extended network technologies.

Some transmedial forms of storytelling that include performance practices through the incorporation of fandom culture across digital and real-world communities have come to articulate the critique of centralistic narratives and ‘good sense’: *Homestuck*, which began in 2009 and ended formally in 2016 (although fandom activities continue), is an emergent storyworld in the form of a web comic with multiple storylines and an extensive fandom in which role-play is a key activity. Notably obscure, *Homestuck* has sometimes been compared to *Ulysses* in length and complexity; when it ended in 2016, the web comic had 817,612 words over 8,124 pages, and was visited by c. 1 million unique users per day (ReadMSPA, 2016). The storyworld of *Homestuck* was developed through non-linear storylines and distributed authorship, and drew on early internet community aesthetics (MS Paint Adventures, 2014). The simplicity of the design aesthetic was a stylistic choice; the structure of the web comic is complex and some of the pages have embedded HTML5 and Flash games for playing within the game. In the story, the main character and his friends accidentally bring about the end of the world by playing the beta copy of the computer game SBURB, and from this point multiple storylines unfold that incorporate over 100 characters (MSPA Wiki, 2015). The *Homestuck* fandom extends across Tumblr, Facebook, YouTube and DeviantArt and differs from many other fandoms by its relative lack of ‘BNFs’ (Big Name Fans, or fans that have attained a degree of stardom within the fandom). *Homestuck* fans can communicate on Pesterchum, an instant message platform that first appeared as a fictive IM platform within the *Homestuck* web comic. Fans subsequently produced real versions that are used for fandom communication, carrying across the use of keyboard quirks specific to *Homestuck* character expression. In addition to fan fiction, the *Homestuck* fandom produces sophisticated digital and physical artefacts, including music, artwork, fan fiction and costumes for role-play. *Homestuck*, with its faux-naïve aesthetic and multilinear storyworld, does not seek to appear to make sense; with less anger and little discernible angst, its fandom embodies much of the critique that mobilised dada, futurism, and The Theatre of the Absurd through blended reality play.

9MOTHER9HORSE9EYES9 emerged unannounced in 2016 as a cross-platform dystopian story across a number of seemingly random Reddit communities, as comments to a wide variety of topics. The literary style, resembling an internet-age Lovecraft, draws on established science fiction, so-called creepypastas and online conspiracy horror stories. A wiki that documents not just all the entries, but all the individual wikis developed to piece together the narrative of *9M9H9E9*, was quickly developed under the rubric *The Interface Series* (Reddit.com, 2016), to enable followers to gain an overall understanding. Not just the tactics for disseminating the elaborate narrative, but the speed and perseverance with which new followers took the documentation and interpretation of the phenomenon on board, marks *9M9H9E9* as relevant to the immersive aesthetic. The first post was made on 18 April 2016; the wiki was set up within a week. The author, *_9MOTHER9HORSE9EYES9*, using the term ‘Flesh Interface’

to describe “a body that has undergone “gnosis,” which is the opening of someone’s mind after an experience that allowed their consciousness to transcend their physical body” (Motherboard, 2016), bringing to mind Clarke’s posthuman metamorphic narratives (Clarke, 2008). Also characteristic of the blended reality strand of the immersive aesthetic is the deliberate blurring of fact and fiction, as exemplified by this statement issued by the author as a self-post in their subreddit, and documented in the narrative wiki with references section of the *Interface Series* wiki:

I should clarify that this information is not fiction. Nor is it true. It is a mix of things which happened and things which almost happened. Things which were and things which could have been. You must understand that the present moment in which we exist is simply a nexus from which trillions of possible pasts and possible futures branch out. The important thing to realize is that these unreal pasts and unrealized futures are related to each other. By examining what might have been, we can come to understand what might come to be (Reddit, 2016).

Here, the purposeful diffusion of the boundary between fact and fiction invokes the sublime by way of the vertiginous, and possibly monstrous, potential for extension brought to the interaction by the imagination of its participants: they are co-opted in the creation of experiential space.

Façade (2005), an augmented reality game, described by its makers as “fully immersive” and using artificial intelligence to create an interactive narrative in which the player participated using natural body movements and spoken dialogue, was also published in a desktop version with a keyboard interface to interact with the characters. On entering the game space, the player would find themselves in the middle of a tense exchange between Trip and Grace, the two characters in the drama. The setting was relatively mundane, with no promise or threat of metamorphosis or annihilation. Instead, psychological immersion was engendered partly by sensory immersion (in the VR version of the game), and partly by the involvement in the game characters’ relationship drama. Depending on the way the player interacted with the characters, they could find themselves throw out of the ‘apartment’ of Trip and Grace, or witnessing a relationship breakdown. In a study on presence and engagement in interactive drama that used both versions of *Façade*, plus an adapted desktop version of the game using spoken dialogue rather than keyboard to communicate with the AI characters, the researchers found that not all participants found the immersive AR version of the game more engaging, even though it engendered a heightened sense of presence. Half of the players participating in the study found that the immersion of the AR game interfered with their ability to experience it as a play space even though Trip and Grace were fairly simply drawn animated characters, and preferred the distance afforded them by the desktop version. Some of the players even preferred the keyboard interface to spoken dialogue, as it allowed them to edit their responses and offered them the option of participating ‘at arm’s length,’ one step removed from the consequences of

their actions in the game space, and with more control over their contributions to the dialogue than the speech interface afforded (Dow et al., 2007).

The challenge and manipulation of personal boundaries also features in the work of Ontroerend Goed. In *Internal*, which was first performed in 2009 and in which the actors are nominally seeking a partner, audience members are invited to interact one-to-one with actors in date-like situations. Subsequently, ‘group therapy’ sessions took place in which personal disclosures offered during one-to-one interactions were opened up for public discussion. Participants reported profound after-effects of the performance, which seeped into ordinary reality through the means of personal letters from the character they spent one-to-one time with (White, 2013: 80). Encroaching on and collapsing ‘safe distance’ is a key component of the immersive aesthetic, but one that is not always experienced as liberating or enjoyable: the element of fear or threat in art can curtail playfulness. Lyotard’s analysis of the sublime feeling in response to art is one of fear that first staggers and dumbfounds the soul, followed by a return to “the agitated zone between life and death,” suggesting by Bamford to be associated with a liminal state (Bamford, 2012: 124). The association of the liminal state with ritual, and the efficiency of ritual when performed as the expression of a totalising script (Schechner, 2013: 80), indicates that the potential for instrumentalisation of the liminal warrants caution. Artaud’s dramatic devices for unsettling the boundaries of the subject draws on ritual to induce liminal states, but does so under a script designed to destabilise the subject as a construct of bourgeois rationality, and thus draws on the Romantic sublime.

While the Romantic sublime, as outlined in 5.2, is defined by Lyotard as the secondary privation of a threat; the privation of the threat of privation, the postmodern sublime unsettles subjectivity: “[...] the shared purpose of art ‘which was to illustrate the glory of a name, divine or human’ is put into ‘disarray’ by the sublime” (Bamford, 2012: 126). The postmodern sublime indicates the limits of reason and representation, and the threat of which we are deprived is one of no-sense. Thus, the sublime can be engendered by the threat of the boundaries of play failing to contain the game, or fear of failing the system of meaning as well as failing within the system, as failure to compose and remain composed, according to good sense. Good sense and good taste exerts a homogenising influence, as does “the unifying beautiful” (Zima, 2010: 127), in contrast to “a sublime which destroys unity” (Zima, 2010: 127). Therefore, “the beautiful contributes, by virtue of its harmony and its universal validity, to the constitution of the subject” while “the sublime threatens the very foundations of subjectivity” (Zima, 2010: 125).

Punchdrunk productions engender a powerful sublime feeling in those who enjoy their work, described by audience participants in this study (see chapters six and seven). A subset of people who attend their performances, like some players of *Façade* in the AR version, do not enjoy the physical and psychological discomfort and disorientation associated with the sublime experience and find it inhibiting, but a significant majority find it exhilarating. Large and active

fandoms have formed around their work, hosted on social media but extending to independent real-world activities. Punchdrunk's fandom share many characteristics with the *Homestuck* fandom, including the independent organisation of themed events, and the production of sophisticated digital and physical artefacts. Like *Homestuck* fans, Punchdrunk 'Spoilers' produce artwork and fan fiction, and engage in costumed role-play. An analysis of 'Spoiler' fandom discourse on social media (primarily Facebook and Tumblr) reveals prevailing themes that serve to generate, maintain and manage the sublime feeling evoked by Punchdrunk's work.

The structure of Punchdrunk's work follows the immersive aesthetic as described in this chapter via emerging and extant examples of its development: spoken language is deprioritised; the participant is physically and sensorial enveloped by the performance environment, which is augmented with theatre technology to heighten visceral responses; the narrative is multilinear and presented in a discontinuous fashion; both narrative and agency within the performance space are distributed and acentric; the active participation of audience members is required for the performance 'machine' to run as intended, making the audience complicit; personal boundaries are manipulated and challenged; and absences play a key role in the dramatic format. At the core of the experience of their work is also the challenged subjectivity of participants, which is undermined by specific dramatic devices. Due to the size of the sets, you find yourself either alone or an anonymous part of an anonymous crowd within Punchdrunk's storyworlds. You are separated from the company you arrive with, and your social identity is deprioritised through the no-speaking rule and masks. Actors play with seeing/not seeing you, and your temporarily suspended social identity affords you a voyeuristic perspective where you are left with the experience of not existing to the performers (or other participants), punctuated by times when you are suddenly exposed to unmasked proximity at close quarters. The masks that serve to suspend participants' quotidian sense of identity also provide protection, and during one-to-one experiences the actor removes your mask, which amplifies the shock of unexpected intimacy in interactions with unknown outcomes. Transgression, ambiguity and uncertainty of boundaries are key to the Punchdrunk aesthetic, both when designing and building sets and interactions; during parts of the performance, audience members navigate sets, which are labyrinthine and designed to hide and override the normal layout of the spaces within which they work, in near-complete darkness.

This brings the argument back to a circle of influence formed through the 20th century by Artaud's *Theatre of Cruelty* and postmodernism's questioning of subjectivity and the subject-event relationship examined by Lyotard, Derrida and Deleuze, among other theorists, and its expression in art, championed by Lyotard as the primary arena for the sublime feeling as a response to the differend; the failure of representation to present an image that is true and the 'gap' at the edge of reason, where representations of a reality that can be described as good or proper sense fail. The resulting disruption of safe distance, articulated in performance art as

subtractions and distortions that serve to transgress and overwhelm, at the time of writing often seeks expression in the immersive aesthetic. The historical events against which the appetite for this particular sublime has formed in performance artists, transmedia artists and audiences include distant mediated wars and ongoing pervasion of the personal via computational interfaces, including wearable technology and networked communication devices. Speculatively, the sublime could serve as a reminder to explore the edges of the illusion in this environment, or perhaps serve as a guide to tactics in a reality that is increasingly blended by default.

Against this historical background, subsequent chapters will explore the immersive sublime in Punchdrunk's work and the experience of participants through analyses based on combined media and performance theory.

Chapter 6: The Punchdrunk system: spatial operations

Extending the performance space to challenge and ultimately envelop the audience was a development started by Reinhardt and fellow exponents of the *Gesamtkunstwerk*, Artaud and the surrealists. From inception, this was a counter-bourgeois aesthetic that developed towards a post-Cartesian subject-event relationship in theatre and performance, with the explicit intent to disorient and challenge representation and a subject position external to the events represented. Artaud's *Theatre of Cruelty*, while not fully realised in its time, has come to inform much of the developments in postmodernist experimental theatre that follow the post-Cartesian impulse: compromising the transcendent subject position that inscribes an order onto the represented object.

Earlier theatre practitioners from Brecht via the Wooster Group, through to current companies such as Forced Entertainment and Elevator Repair Company, have explored the minor aesthetic through failure of representation and, by extension, the ideological function of humanistic art through alienation or *Verfremdungseffekt*: establishing an intellectual distance between the subject and the event that frustrates bourgeois representation (Chow, 2012: 21). Also within the minor aesthetic but taking a path close to Artaudian theory, Punchdrunk redraw the boundaries of the stage to physically engulf the audience and disrupt the conventional transcendent perspective of theatre audiences through challenging the identity construct that lies at the heart of conventional representation. Moving beyond Artaud's *Theatre of Cruelty*, the call for active participation in Punchdrunk's work engenders a rift between the desire to be in control (as defined by normative constructs), and the desire to perform successfully in response to the situation, thus entrapping their audiences in complicity.

6.1 The becoming of Punchdrunk

Felix Barrett, Punchdrunk's founder and Artistic Director, studied drama at Exeter. In 1995, he saw Wilson and Kuhn's installation *H.G.* in the Clink Street Vaults, produced by Artangel. He went on to explore theatre performances in unusual locations during his time as a student in Exeter, staging an early production of Büchner's *Woyzeck* in the Territorial Army barracks (Hoggard, 2013). At the University of Exeter, where Forced Entertainment was formed 15 years prior, Barrett also met his long-term collaborator Pete Higgin, who acted in the first production of *Woyzeck* (StoryCode, 2012). Higgin later initiated the formation of Punchdrunk Enrichment, to extend the work of the company to the educational sector as well as through digital R&D. The company that became Punchdrunk grew out of Barrett's early explorations and collaborations at the University of Exeter. The first official Punchdrunk show was *The Moon Slave* in 2000; a theatrical experience for one audience member at a time. In 2002, Barrett met

Colin Nightingale, Punchdrunk's senior producer. The core team of the company has remained the same since with the addition of Maxine Doyle, who joined the company as a choreographer shortly after Nightingale, after they decided that they wanted to try more physical forms of expression to support the non-linear narratives.

Intimate one-on-one experiences, in contrast with the scale of the larger shows and embedded within them, are key parts in Punchdrunk's work. *The Moon Slave* was created in 2000 as theatrical experiences for one audience member at a time. *The Moon Slave*, based on Pain's horror story from *Stories in the Dark* (Pain, 1901), was an intimate mystery tour that played four nights for one person at a time, and four people in total. The audiences of one, expecting a performance in a village hall in Exeter, entered a room with 200 empty chairs, all with programmes laid out on the seat. A phone started ringing inside a parcel on the stage, and after answering, the participant received the instruction that a car was waiting outside for them. A masked chauffeur subsequently whisked them away to a mansion where the rest of the experience took place as a gradually unfolding mystery (Eyre, 2011). Punchdrunk received critical acclaim for this and subsequent shows, and over the next few years gained a semi-mythical reputation with further work in 2001 (*Johnny Formidable*, *The Tempest*), 2002 (*Chair*, *The House of Oedipus*, *A Midsummer Nights Dream*) and 2005 (*The Yellow Wallpaper*, *The Firebird Ball*) (Tomlin, 2014: 279-280).

These early productions explored what have remained signature elements of Punchdrunk's theatre; site-specific installations mixed with performance, text embedded in the shared physical space of performers and audience, non-linear narratives, and a roaming audience (Worthen, 2012). During the run of *The Firebird Ball* in 2005, the company attracted the interest of Nicholas Hytner, then Director of the National Theatre. This was to lead to an innovative production of *Faust* set in 1940s-50s Americana in collaboration with The National Theatre in 2006. Having already developed touch and the haptic dimension of experience design as a key component of their work, *Faust* established Punchdrunk's method for expressing complex ideas through the language of choreographed movement in space (Tomlin, 2014: 273) and brought the company to recognition as producers of innovative theatre on a national scale, attracting audiences of nearly 30,000 people during a run of 119 performances. *The Masque of the Red Death* at the Battersea Arts Centre, housed in the Victorian Battersea Old Town Hall, incorporated several of Poe's macabre stories and culminated in the final scene of the title story, with a scene where the audience were evacuated to escape the plague and found themselves in a ballroom they had not previously known existed. The title theme extended into The Red Death Lates masquerade after parties which ran at weekends during the 7-month-long, sell-out run of *The Masque of the Red Death*. For Red Death Lates, Punchdrunk worked with Gideon Reeling, who created a unique programme for each weekend (Baird, 2008). An added feature was the

alternate reality game embedded in the set of *The Masque of the Red Death*: an early, albeit not entirely successful, attempt to integrate games with the production.

In 2008, the company was awarded support from the Arts Council England. This allowed them to develop from working on a project-by-project basis to having permanent employment and realise their ambitions for productions on a much larger scale, including an early version of *Sleep No More*, which opened in Boston in 2009. Also in 2009, the company was approached by Kevin Spacey, Artistic Director of Old Vic Theatre, with an interest to collaborate. This led to *Tunnel 228*, an immersive art exhibition underneath Waterloo Station, which was created together with 24 contemporary artists. During the run of this show, it became evident that the audiences built by Punchdrunk engaged with interactive environments in a particularly inquisitive way. One of the artists created a piece of work using the feathers of racing pigeons, which were marked with the breeders' telephone numbers. After the show had been running for some time, the breeders started complaining about being inundated with phone calls from strangers asking veiled questions about clues they imagined that the phone numbers pointed to.

The Jacobean tragedy *The Duchess of Malfi*, written in 1612-13 by Webster, was a 2010 co-production between Punchdrunk and ENO that took the form of a deconstructed opera with a score composed by Rasch. The production took place in a 1960s office complex in Gallow's Reach, East London, and featured 21 singers and dancers and a 69-piece symphony orchestra. The narrative was driven by the singers rather than the usual dancers and actors, which provoked mixed reviews. The ENO performed the opera in two full cycles during the performance rather than the three cycles that normally form the narrative structure of Punchdrunk performances, as the 12,600 m² set made it impossible to move the orchestra around fast enough.

The two productions that are primarily discussed in this research, *Sleep No More* and *The Drowned Man*, are both developments of previous work. During the Boston production of *Sleep No More*, an adaptation of Shakespeare's *Macbeth*, in 2009, the company attracted interest from collaborative partners in New York, which allowed them to redevelop the production for New York. This, the first commercially produced production of the company, opened in 2011 and is, as of 2016, still running. The show has 158 people on the payroll, and maintains 100 performance/installation spaces over five floors in a West Chelsea warehouse transformed into McKittrick Hotel. 400 audience members per show roam the set at will, piecing together the fractured narrative through physical movement through the set, often through following specific characters. The hour-long cycle of fragmented performance elements is formed around a structure based on twelve performance zones, each with their own soundtrack, within which twelve five-minute performance slots play out, and repeats three times over the evening, allowing audiences more than one chance to experience scenes. The number

of different scenes guarantees that an audience member cannot experience all performances during one visit, resulting in unique, and often quite different experiences for each visitor and each visit. Several hundred people worked with the build over four months. *The Drowned Man* was based on *Woyzeck*, which Barrett (as mentioned above) produced his earliest version of while still at university. After several failed negotiations for a suitable building in London between 2010 and 2012, the company finally secured a contract for the Old Sorting Offices by Paddington Station in December 2012, where they opened *The Drowned Man* in June 2013. The show was their most ambitious in scale to date, with 170 individually created rooms over four floors, a cast of 35 actors, and a capacity of 600 audience participants per night. The company used a similar format to *Sleep No More*, but with a more complex and layered narrative structure, in keeping with the original text; *Woyzeck* was overlaid with elements from West's *The Day of the Locusts* and Bradbury's *Something Wicked this Way Comes* (The-drowned-man.wikia.com, 2015), repositioning and reimagining the narrative of *Woyzeck* for a setting in Temple Studios in Encino, California, in the early 1960s. Thus, the Woyzeck/William and Marie/Mary character pair are mirrored in the Woyzeck/Wendy Marie/Marshall character pair with reversed genders, and the author, Büchner, who died before completing *Woyzeck*, features in his absence as the deceased George Buchanan, the author of the script for a movie called *The Drowned Man*, which is to be filmed at Temple Studios. Sets within the set, as well as the nested narrative, invite audiences to move between several levels of fictive reality as they navigate the performance area. Although the resulting productions seem fragmented and disorienting, the company works closely to the selected literature, and both sets and performances are richly encoded with textual elements in literal and metaphorical form.

As the company was getting ready for the opening of *The Drowned Man*, they were simultaneously preparing *The Borough*, which revisited the one-to-one experience format that the company worked with for *Moon Slave* in 2000, played to one-person audiences for 16 days in June 2013 during Aldeburgh Festival. Participating in *The Borough*, the audience members found themselves on a solo journey guided partly by Crabbe's poem and partly by Britten's opera *Peter Grimes* (based on the poem), woven into a paranoid sound piece with real-world bleed from both actors and community performers that starts on a deck chair on the beach of Aldeburgh, and ends up with the dramatised experience of a community turning against them (Drew, 2013). Punchdrunk opened a new version of *Sleep No More* in Shanghai in June 2016, and are currently working on a new production in California, following the success and long run of *Sleep No More* in New York.

6.2 Emergent order/s

In recognising the transcendental position as one outside of the practice of art, at a distance that allows for evaluation (Certeau, 1984: 77), Certeau draws attention to the subject-event

relationship in a manner that will be key to the first part of the analysis of Punchdrunk's theatre. A theatre that is only fully realised through the actions of the audience as they generate their own narrative through tactical emergence within the performance environment is, in one sense, a kind of 'Schrödinger's theatre' that cannot be observed without changing the course of the event, and the two productions that are primarily being considered here are thus regarded as being created for eventualities, rather than as fixed events. This research therefore seeks to investigate through documentation and analysis the emergent operations of both the company and their audiences.

The Punchdrunk productions analysed here as interactive systems are robust enough to withstand the physical participation of 400 (*Sleep No More*, New York) to 600 (*The Drowned Man*, London) audience members per show, who are afforded free movement across very large sets during one or two three-hour performances every night, for production runs lasting one year (*The Drowned Man*) to five years, and counting (*Sleep No More*). In order to create interactive environments that support the effective suspension of disbelief and preserve the integrity of the storyworld, the company embeds multiple narrative layers, through physical making and performance, resulting in productions that are extremely rich in detail. Freely roaming audiences can potentially disrupt or destroy any aspect of the production, but the majority align productively with and contribute to the performance. Features of the physical sets, and the performances of actors/dancers and Black Masks, support self-regulation and corrective regulation of audience behaviours through narrative operations, developed in tandem with other aspects of the creative process. To gain insight into the operations that generate and stabilise such conditions, I undertook this research from a vantage point within the making of and participation in Punchdrunk's theatre, attempting an "art of operating and an art of thinking" as suggested by de Certeau (Certeau, 1984: 77). The aim of the research was to produce an analysis of Punchdrunk's interactive experience design that escapes the "order of what it is sufficient or necessary to know, and, in its characteristics, concerns the style of tactics" (Certeau, 1984: 79, original emphasis). This chapter presents an analysis of the methods employed by the company to schedule, negotiate and extend licence to the agency of participants, by way of de Certeau's delinquent stories.

Punchdrunk's theatre is often described as visceral (Machon, 2011) and immersive (Machon, 2013: xv), based on the overwhelming sensory effects and the physicality of both performance and participation. Their productions envelop participants in encounters and emergent narratives with uncertain outcomes under disorientating circumstances. Close engagement with the making practices of the company reveals strategies and a structured approach to develop performances and sets that are sufficiently detailed to support the suspension of disbelief by ambulatory audiences that are given the licence to investigate the set at will. Punchdrunk's storyworld, described as such by company members and audiences alike

(COM-F-29072014, COM-M-21072014, AUD-F-04072014, AUD-M-01082014), comprise upward of 100 rooms or spaces (*The Drowned Man* had 170 unique installation rooms/performance spaces), performing a double function as fully interactive installation rooms and performance spaces. The storyworld of Punchdrunk have been compared to computer games, an analogy confirmed by Barrett (McMullan, 2014); specifically MMORPGs (massive multiplayer online role-playing games), where multiple game levels, manifest as storyworlds, are navigated by large numbers of players in avatar form.

The term ‘immersive’ is applied both to situations that are physically immersive and to the psychological and sensory state of immersion, and audience members interviewed for the purpose of this study use the term for both purposes. Punchdrunk company members sometimes avoid the term ‘immersive’ as a descriptor of their work, but discuss in interviews components of experience that are often understood as being part of the immersive theatre aesthetic, particularly in regard of participation being guided by ‘instinctive’ or embodied cognition (COM-M-21072014, COM-M-27092014). The lack of explicit guidance, together with the extended licence to navigate and interact with the set at will, creates a situation that can be perceived as free of rules, as the set of rules that normally guide theatre audiences are suspended (COM-F-29072014). Some company members do, however, point out that this suspension of rules is only partial, and that the performance is designed to be enjoyed without obstructing or disrupting the actors (COM-M-15092014, COM-M-27092014). While this is not contested and the safety of performers is protected by stagehands (COM-M-27092014), other company members emphasise that the company avoids stipulating too many conditions for participation, in the interest of maintaining the aura of permissiveness that surrounds the work of the company (COM-M-21072014, COM-M-29072014). The licence that is extended to the audience means that unexpected and unaligned behaviours are anticipated and accommodated through processes that have been developed to prevent these becoming destructive to the experience (COM-M-27092014). The meta-narrative of the company, created through rumours and experiences passed around on social media and via word of mouth, suggests that one ‘should’ have an extraordinary experience. Propelled by the desire to avoid failure and achieve a satisfactory or good experience, the majority of audiences (see section 8.2) persevere and develop satisfactory tactics accordingly. On entering the space, audience participants are separated from their company and masked. To further support disruption of the quotidian identity of participants, talking and use of mobile phone technology is discouraged through implicit, rather than explicit means. No maps or directions within the intentionally disorientating, labyrinthine space are given, and the performance environment envelops participants in near-complete darkness that it takes some time to get accustomed to. As a participant, you may spend time alone in spaces where no one else is present, apart from the unseen presence of the Black Masks, who remain hidden within the set until their interaction is called for. At other times, crowds of masked

audience members follow performers traversing the set, often at speed. The finale is the only time when the audience is gathered in full. This is the first time the full house witness themselves as a sea of white masks, with lights and sounds having directed them, often without noticing or understanding how this occurs, to the space where it is staged. The impact of finding oneself directed by means not consciously understood, which occurs both in interactions with the Black Masks (AUD-F-03072014) and with the space (AUD-F-03072014, AUD-F-04072014, AUD-M-10072014, AUD-M-11072014, AUD-M-01082014), are examples of narrative regulation that raises questions of agency and contributes to an often expressed awe, rather than feelings of being restricted.

As the company's work positions audiences and actors within a situation in which no one is completely in control, and in which all participants are subjects to the dynamics of the performance space itself and the risk of unforeseen events is always present, the shows present the opportunity to experience disorientation and to respond with emergent tactics for navigation and a satisfactory experience. The direction or regulation of the mirror choreography of the audience has likewise been developed through iteration over the course of Punchdrunk's existence as a company, and was further refined, particularly during the initial month of running *The Drowned Man*. Company members on all levels participate both as audience members and stagehands/front-of-house staff or Black Masks, as discussed in more detail below, to see directly the influence of the space and the performances on the movement and experience of audiences. To give sufficient structure to the experience and production to sustain this level of licence, the productions are built around a set formula. The performance space is subdivided into 12 performance zones, each with their own soundtrack that coordinates the movements of travelling performers and the actions of resident performers (COM-M-27092014, COM-F-03122014). Each zone has 12 loops of 5 minutes each, comprising the full 60-minute loop that repeats three times during a performance (COM-M-27092014) apart from the final loop, which leads to the finale. The loops are detailed in the large spreadsheet displayed on the wall backstage during the build and run (fig. A2.3). The smooth running of the Punchdrunk system, and the negotiation of emerging irregularities, is jointly managed by performers and the Black Masks. The Black Masks combine and extend the roles of stagehands and front-of-house staff to include the articulation of ambiguity in the interactions between the interface presented by the company (performance and set) and audience participants. Dressed and masked entirely in black, they occupy the deepest shadows of the set and remain invisible until their intervention is needed to either assist struggling participants or prevent damage being done to the production as a result of destructive behaviour. They interact wordlessly with audience members, in a manner that is carefully developed to not break with the ambience (COM-M-27092014); instead, their appearance within the awareness of participants appears to enhance immersion through diffusion of the boundary between participant agency and 'system' agency (AUD-F-03072014).

They thus articulate and extend ambiguity, and the potential for loss of self through metamorphosis. The articulation of the unknowable, the ‘dark’ or the shadow side, is a recurring theme in Punchdrunk’s work, in both the dramatic and the spatial narratives. This is further expressed in the profusion of narrative detail that is embedded deeply within the set, only uncovered by inquisitive audience members. The unseeable is thus not mute or passive in Punchdrunk’s work; it is articulated and alive with experience potential, albeit neither announced nor evident at the surface level.

The articulation of space and darkness, being key to the experience, also initiates the physical design process. The first step when Punchdrunk prepare a building for transformation into a performance space is the blackening out of all windows (COM-M-27092014). The directors and the lead designers then walk the space, visualising the narrative (COM-F-29072014) within it, and roughly block it out. In this fashion, the building is allowed to ‘speak’, as are the narratives carried in the imagination of the directors and lead designers, in a largely implicit process that builds on the shared experience of long-standing collaboration (COM-M-29072014). The building is subsequently mapped out and broken up (COM-F-29072014): “territorialized” – stratified and formed/encoded (Deleuze and Guattari, 2004: 45-46), or, in the words of de Certeau, prepared as a “theatre of actions”; becoming the “field that authorizes dangerous and contingent social action” (Certeau, 1988: 125). In the case of the old sorting offices at Paddington, a substantial building with five largely open-plan floors, four of the floors were included in the performance space (plus a section of the basement that was used during one-to-ones but not open to the public for unaccompanied exploration), totalling c. 14,000 m² of floor space used, with the top floor retained as a design workshop for company use only.

About 500 people were involved in the build and run of the production (COM-M-29072014); 90 people alone were required to run each show. Another 60 were employed to reset and maintain the set in the day during the run (COM-M-29072014). 250-300 people were involved in the build over several months (COM-M-29072014). The rapid initial conception and implementation of spatial metaphors in the subdivision and shaping of the performance space, as well as the collaboration within a very large team, is facilitated by a shared aesthetic (COM-F-29072014) that has contributed to the meta-narrative that serves the continuity of the company between physical productions (which, in the case of larger productions can be spaced several years apart), both in regard of company members and audiences. The continuity of the company’s public meta-narrative between productions is carried by communication on digital and social platforms through R&D apps like *Silverpoint* and fandom communities on, for example, Facebook and Tumblr, moving in and out of visible and niche layers of communication. The ability to move in and out of visibility with material productions in a diverse range of physical locations with little or no advance publicity is a key part of the company meta-narrative. Examples of this capacity for coordinating skilled actors, designers

and theatre technicians on short notice include not just *The Drowned Man* and *Sleep No More*, for which the company had less and just over three months, respectively, to complete the build, but also commissioned productions like the immersive mystery campaign to promote Jack White's *Lazaretto*. This commission, which included the setting up of a fake medical company called Vescovo with a web presence plus 'documentary' videos set in 1948 that were hosted by the Wellcome Institute, recruitment of 100 participants in 'medical screenings' via internet communities, and the creation of a fully equipped 'medical testing centre' in central London with an adjoining concert space for a Jack White concert, took three weeks to create, from inception to event (COM-M-29072014). The meta-narrative, to which both an extended network of people who contribute to productions and audiences respond, must in the case of Punchdrunk be considered an essential part of the making of 'theatres of action', as it performs the function of founding, mediated by a range of physical and social structures, which will be discussed in chapters seven and eight.

6.3 Embodied spatial operations

Memory, as the basis of *metis* in the effective application of metaphor for spatial transformation, plays a role in embodied participation that is guided by body schema and bodily narratives as well as the pursuit of sense-making through connecting and 'completing' story elements. "Memory mediates spatial transformations" (Certeau, 1988: 85), de Certeau claims: "[...] it produces a founding rupture or break. Its foreignness makes possible a transgression of the law of the place. Coming out of its bottomless and mobile secrets, a "*coup*" modifies the local order." (Certeau, 1988: 85, original emphasis) Here de Certeau implies a disruptive or unexpected use of memory that, in the context of storytelling, underpins metaphor (from the Greek *metaphorai*; to carry or transfer) as the arrangement of setting that, through associations, creates the possibility of multivalent interpretation and meaning-making.

Romantic and absurdist movements in contemporary art have embraced the exploration of the grotesque in various forms, starting with symbolism and continuing with dada, futurism, surrealism and post-WWII art in the 20th century. Contributing to the discourse of the grotesque as a life-affirming, if grossly sensual aesthetic in literature and art is Bakhtin's discussion of the carnivalesque in *Rabelais and His World* (Bakhtin, 1984), and in experimental art the inclusion of elements of 'low art' and popular forms of entertainment (e.g. cabaret, cinema, computer game and comic book aesthetics). The bawdy, delinquent old gods referred to by de Certeau (Certeau, 1988: 129) hail from the same aesthetic lineage, supporting the association between the grotesque aesthetic and resistance to dominant forms of narrative and representation in popular and experimental art and entertainment. The postdigital aesthetic's inclusion of impurity, examples of which being computer game art aestheticising glitches and the deliberate failure of representation (Apperley, 2015: 236), suggests the incursion or insinuation of

delinquency into contemporary experimental art which, like its precursors, includes ‘low’ and popular forms. Regarding the grotesque in a Bakhtinian light, i.e. as life affirming, suggests that new developments in interaction and interface design should invite the old, delinquent gods and consider the grotesque in emergent forms of expression as part of a dynamic, yet functional whole. The following sections will explore the structure of interaction design as a continuum stretching between the order of place and the extension of space, in which participants may explore and apply *metis* to emergent tactics.

De Certeau's theory of narrative and its role in the production of space and place provides a framework within which we can examine the dynamic between planned purpose and emergent behaviours as approaches to physical and digital space:

Interaction between human and machine (the interface) can thus be conceived of not as a punctual process of exchange determined by the machine, but as a distended moment in which the experience of the different temporalities and spatial dynamics involved in computer use is taken up into an arc of narrative, where sense is given to experience through its ordering as narrative (Bassett, 2007: 32).

Bassett emphasises community in her discussion of de Certeau's theory of spatial narrative as an emergent production of travelling in the virtual city; ‘city’ here serving as a metaphor for the habitat that is a product of the combined strategic and tactical forces that make up the contemporary spaces we navigate in the process of producing, defining and sustaining a sense of identity as we move in and out of more, and less, visible virtual domains (Bassett, 2007: 159). The inclusion of this emergent spatial narrative in the ‘weird materialities’ (Parikka, 2012b: 99) that combine in interactive systems is supported by Chun's positioning of software as a metaphor for a range of phenomena that incorporate programmatic code, including the mind, culture and ideology. Chun suggests that software may be understood as inclusive of the computational agency involved in the navigation of everyday life:

[...] software's vapory materialization and its ghostly interfaces embody — conceptually, metaphorically, virtually — a way to navigate our increasingly complex world. (Chun, 2011: 2).

As indicated by Bassett, a spatial discourse allows us to de-naturalise the largely intangible and, by virtue of being man-made, social materialities of software, and regard the systemic digital space in more relatable terms that yield understanding of the power structures that produce and regulate it.

In a similar vein, Parikka proposes the “weird materialities” of the digital that include hardware and software, with software including “signs, meanings, attractions, desires” as well as the “processual” (Parikka, 2012b: 97-99), which reaches toward the inclusion of participants and co-producers of meaning in interactive digital systems. Taking the necessary interaction of audiences for the completion of interactive narratives into account as proposed by Bogost, participants should be regarded as components of Parikka's ‘weird materialities’ for interaction

design, raising the question of how we conceptualise, define and design for audience participation. To comprehensively consider digital interaction design that includes, in the critical sense, audiences that behave in ways we could describe as algorithmic, we may need a *psychotechnics*, as suggested by Parikka in the context of the colonisation of the psyche by technological regimes affiliated with cognitive and affective capitalism. Drawing on Kittler and Stiegler, Parikka discusses psychotechnics as a new political economy that takes into account the intertwining of the psychic and the technological that utilises and capitalises on memory and cognitive operations, including embodied cognitive behaviours such as socialising and communicating (Parikka, 2012a: 73-74). In such an economy, participants, by virtue of being key to the interaction, may no longer be under-acknowledged by being regarded as ‘users’ that are external to the system itself, and the dependency of the system on participants can be clearly articulated. The inclusion of audience participants, through embodied entrapment, in the ‘weird materialities’, i.e. the hardware, software and human agents that combine in interactive systems, reveals them to be a consequential material, no longer external to the ‘art-work’ and in possession of agency. Although neither physical material nor participants-as-material afford the designer absolute control, the material specificity of participants (which includes agency) emphasises the limits of designer/performer control: “you’re not sure whether they’ll be watching you from very close, or from the other side of the room, whether their coming in for a close shot” (COM-M-15092014).

Assuming the acceptance of this proposition, with designers acknowledging participants as cognitive and algorithmic agents within and essential material parts of the interactive system, a second problematic emerges regarding the structure of the experience; whether the production of place or space dominates designer intent and participant actions, and the degree to which either are transparent. The entrapment of the audience by the designed interaction confronts the entrapped with this problematic, resulting in a rupture where identity and materiality are simultaneously under question (Chow, 2012: 47). In Punchdrunk’s theatre, this occurs as audiences are revealed to themselves as a part of the ‘weird’ materialities of the system:

I definitely felt like most of the decisions, like the control was kind of in somebody else’s hands, and I had a diminished control [...] Like being a spectator and an actor all at once [...] the stuff you do have to decide on is completely personal, but where your body is isn’t [...] I wanted to be in the machine, in the software, I wanted to work with the algorithm, however you want to put it. I wanted to function, I didn’t want to be the glitch that was in the bar, I wanted to function along with the rest of the machine that was going on, that was also a narrative (AUD-F-03072014).

Although not articulated in the form of instructions or conventions, interviewed audience members were generally aware of the choices presented to them in regard of navigation and articulated their role as ‘connectors’ within the narrative (AUD-F-03072014, AUD-M-10072014, AUD-M-11072014, AUD-M-01082014). Participating audience members in this

study described two primary navigation tactics; following their impulses in relation to the set and/or the actors (AUD-F-04072014, AUD-M-10072014, AUD-M-11072014) and trying to “follow the story” (AUD-F-03072014, AUD-M-01082014) in order to make sense of the narrative, sometimes expressing mild anxiety about what the ‘right decision’ is, and how not to ‘fail’ by ‘missing out’. These themes recur to some extent in all audience interviews undertaken for this research with a varying degree of importance and focus. The two primary approaches that emerged could speculatively be modelled as algorithms, e.g. ‘Tabu Search’, ‘Reactive Tabu Search’, ‘Differential Evolution’ or ‘Bayesian Optimisation Algorithm’ for set-driven navigation and search, and ‘Particle Swarm Optimization’, ‘Bacterial Foraging Optimization Algorithm’ or ‘Scatter Search’ for performance-driven exploration (Brownlee, 2015).

Unlike non-human algorithms, audience participants typically switch between several search or navigation strategies in response both to differing challenges from the environment, learning, and idiosyncratic associations. Discourse analysis of interviews with audience and company members reveals that audience members (fig. 6.2) discussed changing tactics in response to changing circumstances significantly more often than company members (fig. 6.3). Based on de Certeau’s theory, the four types of relationships to the interactive space that were identified in this analysis of the interview data were ‘Space’ (referring to practices or behaviours that extend or relate to the extension of licence and potential within the interactive environment), ‘Place’ (referring to practices or behaviours related to ordering, scheduling, coordinating or mapping of space and movements), ‘Narrative Regulation – Spatial Operations’ (describing the regulation of audience behaviours within the narrative space, including self-regulation), and ‘Changing Tactics’ (describing changing responses to emergent or surprising circumstances) (fig. 6.1).

Node	Type of reference
Space	Interview references describing practices that extend licence and/or experience potential, and the experience thereof.
Place	References to practices that schedule, order or map the performance space, time and in-system behaviours of participating audience members.
Narrative Regulation – Spatial Operations	References to practices that regulate or manage transitions between the extension of licence within the interactive environment and order or alignment with the design.
Changing Tactics	Descriptions of adaptive responses to changing circumstances.

Figure 6.1: Categories (nodes) for discourse analysis based on de Certeau’s theory of space and place.

Audience participants discussed spatial approaches in non-convergent terms across all nodes with only the third most predominant approach (Narrative Regulation- Spatial Operations) being convergent, featuring in 4:6 interviews. This indicates a scattered approach to spatial tactics. Audience participants moved between different approaches to space and place, frequently changing tactics to optimise their experience while within the interactive system, and responding to narrative signals in the environment that served to regulate their behaviour.

Interview	Dominant node	Secondary node	Tertiary node
AUD-M-28062014	CT	NR-SO	NR-SO
AUD-F-03072014	CT	PI	NR-SO
AUD-F-04072014	Sp	CT	PI/NR-SO
AUD-M-10072014	PI	Sp	NR-SO
AUD-M-11072014	NR-SO	Sp	CT
AUD-M-01082014	PI/NR-SO	PI/NR-SO	Sp
Audience totals	-	-	NR-SO (4:6)

Figure 6.2: The prevalence of audience references coded to nodes Changing Tactics (CT). Space (Sp). Place (PI) and Narrative Regulation – Spatial Operations (NR-SO). Dominant and secondary nodes were spread across all categories, indicating that none of the spatial approaches dominated clearly in audience interviews. Only the tertiary node revealed a convergence of references, mapping to NR-SO.

Their idiosyncratic and changeable responses to a deliberately challenging environment suggest that audiences cannot be regarded as predictable on the level of the individual, although the overall ‘consistent inconsistency’ can be relied upon as a form of fluid response capacity. If audience participants, as proposed in this research, are included in the ‘weird materialities’ of interactive systems, the results of the analysis presented here challenges the accuracy of overly rigid transcendent perspectives on audience responses and behaviours. According to the results of this study, audience behaviours are dominated by responsive inconsistency, with a weaker convergence that only appeared at the third level of analysis, and then in the category of Narrative Regulation – Spatial Operations, which describes situated responses that by their nature are immanent and relational. The modelling of audiences in design of interactive systems thus requires our critical attention, as they are instrumental to the art-work of interaction design. This research suggests that we should prioritise inconsistency over persistence when modelling participants in interactive systems as they, given the opportunity, are fundamentally changeable or even playful, as indicated by Galloway, in order to mediate the frictions presented by the interfaces that make up our physical, as well as our digital, environments (Galloway, 2012: 29). Taking this ‘delinquency’ into account, the immersive aesthetic creates conditions of possibility

that reveal the fundamental fluidity of human participants in interactive systems, which challenges the place defined and occupied by enlightened Man. It leaves neither the subject nor the event of the Cartesian model standing as homogenous and persistent, suggesting that interaction design should instead take a post-Cartesian, or posthuman, approach to the modelling or conceptualisation of participation.

Punchdrunk performance environments offer characteristics of both space and place; affording extensive physical and social exploration, while presenting spatial, sensory and social limitations in order to challenge the conventional perspective of proscenium theatre and, by extension, the Cartesian model of representation. As was shown in Figure 2, neither space nor place dominates accounts of participation given by audiences. In contrast to the analysis of audience member interviews, the analysis of company member interviews show convergences in the descriptions of practices and behaviours relating to Space, Place, and Narrative Regulation – Spatial Operations. The most prevalent node was Narrative Regulation – Spatial Operations, describing the narrative mediation of space and place, including interventions for the management of and transition between the two. This suggests a dynamic approach to production design that focuses on narrative as a spatial practice that meets, accommodates and negotiates with audience agency, reflecting the creative ambition expressed in interviews with company members:

I think the perfect Punchdrunk audience member is someone who is aware of their own body, or their own sort of capability, and are willing to let that be taken over by the space, and taken over by the performance itself (COM-M-21072014).

Figure 3 shows a predominance of Space over Place in accounts given by company members, as the less convergent secondary and tertiary nodes, in comparison with the dominant and strongly convergent node Narrative Regulation – Spatial Operations. The predominance and convergence of descriptions used in interviews with company members indicate their importance to the design process, both during and after the build.

The active balancing of affordances and limitations as a narrative practice (Bassett, 2007: 159) comes to expression in the devising and practices described in interviews by actors and Black Masks, who operate in a combined role as stage hands, stage managers, and extensions of the set and performance space (COM-M-15092014, COM-M-27092014). The system described in 6.2 serves as a structure; a place established by a *coup* within which the different production teams negotiate spatial operations with the audience in mind: “[...] moulding that material of the audience [...] it’s like you’re civil engineers, putting up structures, you know: installing systems of... to direct that flow” (COM-M-15092014). The spatial component of this particular narrative practice is evident also in the active management of distance and projection: “you might decide to bring the pitch of your performance down to a very subtle, close up kind of level, so that you’re giving them something that they know is just

for them” (COM-M-15092014).

Interview	Dominant node	Secondary node	Tertiary node
COM-M-15092014	NR-SO	PI	Sp
COM-M-27092014	PI	NR-SO	CT
COM-F-29072014	NR-SO	Sp	PI
COM-M-21072014	NR-SO	Sp	PI
COM-M-29072014	NR-SO	Sp/PI	Sp/PI
COM-F-03122014	NR-SO	Sp	PI
Company totals	NR-SO (5:6)	Sp (4:6)	PI (4:6)

Figure 6.3: The prevalence of company member references coded to nodes Changing Tactics (CT). Space (Sp). Place (PI) and Narrative Regulation – Spatial Operations (NR-SO). Spatial approaches mapping to NR-SO has a clear predominance in the interviews where company members describe their work, with 5:6 company members referring most commonly to spatial operations that regulate the interactive narrative, and to practices that serve to manage transitions between extensive/emergent behaviours and experiences. The second most common type of reference, used by 4 out of 6 interviewees, indicated practices associated with facilitating extension of audience agency and emergent behaviours. The third most common reference (4:6) fell under the ordering/scheduling/mapping category. CT was the least predominant approach.

The traditional presentation of visual art invites or even dictates contemplation and discourages physical interaction. Similarly, theatre on the proscenium stage is formulated with distance to the audience in mind. Sets, stage technology, costumes and acting are designed and amplified to project across the auditorium, and audience interaction, i.e. clapping, cheering or booing, follows suit. Distance, then, signals hierarchy and place: it affords a surveillance view to the subject removed from the observed events. The proscenium theatre format allows both audience members and actors a distance perspective, with loudness and projection suggesting the enactment of a crosswise territorial challenge. The detail and close-range perspective of the immersive aesthetic instead invites the collapse of distance through touch, access and affordances; emergent types of interaction that fall under the rubric of space, rather than place: “[...] the wrong detail could shatter everything, and the right detail [...] can be so suggestive: just draw you into that world in such a powerful way “ (COM-M-15092014). The emphasis on detail in both performances and set design reverses the traditional projection techniques of proscenium theatre, and instead encourages Punchdrunk audiences to engage with the performance at close range.

For meaningful interaction, the distance between two partners has to be closed, and contact, mediated or otherwise, established. In traditional presentation of fine and performance art, this contact for the most part occurs mediated form via what may be termed cultured

sensitivity or expertise, i.e. taste, within which hierarchy is implicit (Bourdieu, 1984: 264). In immersive theatre, taste makes for less than a distinction than the willingness to surrender to disorientation and actively engage with the negotiation of the moving present. It is suggestive of an agency with a locus within the terrain. In this, there is a sacrificial element; audiences offer up their social bodies and expectations to transgression and absorption into the “machine” (AUD-F-03072014). This is the script of ritual; *dissolve et coagula*, which takes the participant through a process of ego-death and reformation. Schechner positions *communitas* as the outcome of ritual, where participants are joined in a new sense of wholeness, together and in relation to the oneness that is the object of the ritual (Schechner, 2013: 70), but the anonymity provided by masks frustrates this experience in live Punchdrunk performances. The Punchdrunk ‘Spoiler’ fandom, described in the introductory chapter, cultivates traditional *communitas* through a set of quasi-religious narrative practices developed independently through online communities and real-life gatherings, described in the introductory chapter. Live performances engender another communality according to ritual scripts that concerns the quest, through which the individual may experience rebirth or metamorphosis as a solo narrative practice (AUD-F-03072014, AUD-M-11072014, COM-M-27092014).

Critical distance, articulated as good sense and the hallmark of the cultured individual, is antithetical to immersion, and immersion is associated with envelopment and seclusion. The place of the cultured individual is within culture, particularly culture defined by the liberal humanist ideal. Envelopment and seclusion suggests another form of place; that of family, home, or church: idiosyncratic places into which wider culture, as defined by secular Enlightenment ideas, do not necessarily reach. Within such places, touch, which has been a key modality in Barrett’s (and Punchdrunk’s) work since his experience of Wilson’s *H.G.* in 1995, confers both acceptance and control, and simultaneously acts as a conduit for affordance and containment. An epistemology of touch is suggested by Bachelard in *The Poetics of Space*, which explores the mediation of space and place within the home via the senses and the process of idiosyncratic meaning-making through poetic imagination. He employs the image of the absolute casket as a metaphor for containment, where “intimate life achieves a synthesis of Memory and Will [...] *Iron Will*, not against the outside, or against other persons, but beyond all the psychology of “being against” (Bachelard, 1994: 85, original emphasis). With this metaphor, Bachelard articulates this ‘being beyond being against’ and thus critical distance, as a function of intimacy. The proximity of intimacy calls for an agency that is spatial and idiosyncratic to the inside of this place, mediated by the sensory experience of consequential materialities. The practices of the Black Masks in Punchdrunk productions demonstrate how touch can be used responsively and situationally (AUD-F-03072014, COM-M-27092014) from within the set to regulate and negotiate this agency (see 7.3 for a detailed account of the Black Mask role). Analogies for working with audiences-as-material that were used in interviews with

company members who worked in direct contact with audience members (COM-M-15092014, COM-M-27092014, COM-M-21072014), e.g. moulding or flow, suggested a tactile-responsive narrative practice. This reflects the practices within the set design teams, where meaning is situationally formed in response to narrative, space, material and emergent circumstances. The conception of audiences in Punchdrunk's theatre is thus quite unlike that implied by the proscenium theatre presentation format in more than what can be deduced from the collapse of distance and focus on detail; they are brought into the total consideration of consequential materials in an emergent and tactile design process.

De Certeau summarises the undoing of the order of place performed by story or narrative: "What the map cuts up, the story cuts across." (Certeau, 1988: 129). In this view, the immersive presentation format is in itself a story in relation to the discourse of representation in more traditional theatre formats. Silverstone terms places 'mediated spaces' (Silverstone, 1999: 89-93) via his description of the home as a place rather than a space, and discusses media space as a "space of flows" (Silverstone, 1999: 7-8). This perspective is particularly relevant to the production of space in Punchdrunk's theatre when taking into account the mediation performed by the Black Masks (see 7.3). As Silverstone takes his definition of mediation from structuration (Silverstone, 1999: 46), i.e. the relationship between structures and agency within those structures, narrative practice in de Certeau's mould performs a certain kind of mediation, perhaps a "delinquent" form of mediation, by virtue of the *metis* of the Olympian gods that de Certeau poetically describes as not gone, but exiled and living on "in the most intimate of domestic habits [...] in our streets and in our apartments" (Certeau, 1988: 129-130).

Ambiguity, transgression, and multivariancy as narrative practices that mediate between place and space, termed delinquent by de Certeau, are coded into Punchdrunk productions on all levels of design (COM-F-29072014, COM-F-03122014). Metaphor, as *metis*, is given form in the set as well as by the actors and the Black Masks: "I can't overestimate the kind of... Everything's planned [...] everything [...] has been distilled and processed" (COM-F-29072014). The designer discusses these processes of encoding as distillation: a form of boiling down, making more potent, subtracting and condensing. This potentiation through subtraction is a form of spatial restructuring, one that increases the metamorphic potential of narrative through metaphor. The resulting narrative code effects "the play of changing relationships between places and spaces" (Certeau, 1988: 118), and the thrust of its spatial organisation carries its own founding, and potentially disruptive, narrative. Returning to Chow's discussion of the artwork as trap and Galloway's definition of interfaces as inclusive of our physical (built) environments, the encoded interface/artwork in the case of Punchdrunk's productions entraps the audience participant within a narrative structure where play emerges as a necessity to mediate the friction between the encoded layers. Play is not intended here to suggest innocence or child's play, but play as formulated by Derrida: the play – or free movement – within a structure that is at the

same time allowed within the structure and limited or held in place by the centre of the structure (Derrida, 2001: 352). Punchdrunk's inclusion of audiences as consequential material in their interactive systems renders a totalising design paradigm impossible. Not, as differentiated by Derrida, due to the resulting ungovernable extent of possibilities (Derrida, 2001: 365), but rather through the idea of supplementarity that follows from conceptualising audience participants as posthuman embodied agents within interactive systems.

Deleuze discusses the impossibility of consciousness being fully aware of the potential extension of thought, using Spinoza's concept of the body as more than our knowledge of it as a template (Deleuze, 1970: 20-21). We understand what happens to our mind as a function of the impact of an idea on our idea of our mind: a relational insight revealing little of the mind itself to us. Deleuze uses this position to declare the impossibility of an understanding of causality in the conditions under which we know things. Instead, we find ourselves subjected to, and lost in, a state defined by the effects of ideas and events upon our mind and our bodies; this being particularly so in the case of 'innocence', exemplified by the child and the Biblical first man, Adam. Deleuze thus denounces happiness as associated with innocence, instead arguing that innocence is primarily defined by a lack of experienced agency. This engenders the "triple illusion" of final causes (Deleuze, 1970: 20), free decrees and the theological illusion, as consciousness first interprets effects as causes, allowing the illusion of taking itself as the first cause to form, and assigning the idea of God as the first cause of all that it is not possible to rationalise as issuing from itself. He gives Spinoza's example of desire, on the basis of which we deem that which we desire as good in order to justify our desire for it, rather than desiring that we judge to be good. Desire, defined by Spinoza as "appetite together with the consciousness of the appetite, is then "nothing else but the effort by which each thing strives to persevere in its being, each body in extension, each mind or each idea in thought (*conatus*)" (Deleuze, 1970: 21). The *conatus* functions in relation to other bodies or ideas; whether these agree or disagree with the subject determines if the cohesion of the subject is expanded to include both the object and the subject or if it is compromised and reduced:

But when we encounter an external body that does not agree with our own (i.e., whose relation does not enter into composition with ours), it is as if the power of that body opposes our power, bringing about a subtraction or a fixation; when this occurs, it may be said that our power of acting is diminished or blocked, and that the corresponding passions are those of *sadness*. In the contrary case, when we encounter a body that agrees with our nature, one whose relation compounds with ours, we may say that its power is added to ours; the passions that affect us are those of *joy*, and our power of acting is increased or enhanced (Deleuze, 1970: 28, original emphasis).

Deleuze, in respect of our interactions with the world, thus brings de Certeau's theory of space and place within: our encounters with external objects or bodies, according to Deleuze, allows us to extend our boundaries to "composition" with them, or, in the case of encounters that encroach and disempower, impose a "subtraction or a fixation" (Deleuze, 1970: 28) upon our

perceived agency. Joy, as an internalised process of extension and composition associated with the experience of extended agency in relation to external objects or bodies, has an internalised spatial component, making joy subject to a query that is informed by de Certeau's definition of space and place: depending on the subject position, it can be a close-range exploratory affect in relation to an emergent present, or a territorial affect in relation to dominion and place.

Considering the centrality of joy or positive affect to interaction design, the conceptualisation and modelling of the participating subject in terms of subject position is thus relevant to the production and performance of spatial and hierarchical relationships.

Having established narrative as a form of spatial operation in this chapter, the next two chapters will investigate how subject positions and subject-event relationships are articulated, i.e. given detailed expression in languages of movement and physical media to generate spatial expression through connecting parts, in meaning-making by interface makers and audience participants in Punchdrunk productions.

Chapter 7: Storymaking in Punchdrunk

The storymaking of Punchdrunk is discussed here from the perspective of embodiment as distributed cognition, expressed through a shared making culture, and includes discursive practices across physical and digital media that produce and maintain the meta-narrative of Punchdrunk as an organisation, and inform the production, i.e. devising of set and choreography, as well as the participation of audience members (addressed in the subsequent chapter). I approached this part of the research as essential to understanding their final productions and the experience of their audiences, as the making culture of Punchdrunk is the carrier of both the distributed agency that makes it possible to produce work on this scale, and a reflection of the structures of thought that informs the work of the company. Cull's call for a "postidentitarian philosophy of difference" for performance theory and the posthuman discourse of Hayles, Braidotti and Clarke, both echoing Deleuzian thought, forms the main theoretical framework for this analysis, which is based on my ethnographic participant study as a researcher-designer, supported by interviews with company members.

7.1 Postidentitarian immanence

Punchdrunk design and build their sets as interfaced experience systems, rather than as frames or backgrounds for stage acting, within which audiences compose their own narrative from many possible combinations of story elements, suggesting an analysis drawing on theories that can also be applied to the analysis of digital environments. Embodiment as distributed cognition and agency fundamentally informs and shapes the experience, production and organisational culture of Punchdrunk's work (mirroring Clarke's psychic, technological and societal). Interviews with company and audience members reveal different degrees of attention to diverse aspects of the production, according to specialism and preference. This analysis of embodiment within Punchdrunk's work is therefore subdivided into three sections, presented in this and the subsequent chapter: set design and production processes; performance; and audience experience, considered in the light of embodied posthumanism, immanence and acentric organisational structures.

Transferring such philosophical and scientific concepts of the distinction between immanence and transcendence to the domain of performance might enable us to generate contrasts between top-down and bottom-up tendencies in authorship, as well as to distinguish between different kinds of artistic organizations (Cull, 2012: 29).

The narrative structure of Punchdrunk shows is a network of stories that present different and interlacing versions of key themes, in the case of *The Drowned Man* including several mirror story lines with reversed identities and alternative metaphors. No individual story line 'makes sense' of the totality on its own, although each one reflects aspects of the key themes, and set

and acting are equally weighted in the production of narrative. The production processes of both rely on extensive delegation and devising, and Deleuzian posthuman perspectives are used throughout this analysis of organisational principles and constitutive micro-interactions within the company and between company and audiences.

Design needs and responsibilities are relayed and distributed to individual designers and performers with considerable freedom of interpretation and execution. This allows the company to layer into the production a level of detail and density of metaphor that would otherwise not be feasible at that scale. The relay process occurs via dialogue and micro-interaction communicating agency, aesthetics and purpose. When a new maker is introduced, they are assigned team members and tasks to work with, and apart from induction to the premises in regard of facilities and safety procedures, there is no formal training given beyond this relay process. You are expected to start contributing creatively as a maker from the start within the given context:

[...] it's a thing that have to you kind of have to grapple with, because you've got exactly what it is, and how you need to create, but you have to kind of, allow the maker to possess it, because otherwise it's...it becomes robotic, and there's no kind of freshness (COM-F-29072014).

Communication regarding work tasks is focused on the storyworld that is being built and the characters inhabiting it (who are spoken of as if they were real), aesthetic qualities, and materials. Tasks are often shared, and you may find yourself in a position of passing on making-instructions to other newcomers within a short space of time. This means that you find yourself relying primarily on following suit and relaying information in ways similar to how you received it. The focus on making is immediate: "I can't [...] overestimate the, kind of instinctive element to it, that... every designer who works with Punchdrunk has to carry" (COM-F-29072014). Within the production timeline, and without information being broadcasted from a central point of issue, heuristics for communication used within teams are therefore prone to be repeated, with every newcomer adding their specific skills and approaches to the process.

Distributive processes communicated with micro-interactions can also be observed within the live performance, where replicable formulae are progressively iterated by performers through optimisation during the run, and where shifting boundaries for audience participation create ambiguity in regard of agency and complicity (discussed further in 6.3.1). Acentricity as an organisational principle is further evidenced by the diversity of first-hand accounts given during interviews. Although some participants implement a more linear navigational strategy to sense-making by following what they perceive as 'main story lines' (AUD-F-03072014, AUD-M-01082014), others adopt strategies that include roaming or browsing the many optional storylines weaving through the performance space (AUD-M-11072014, AUD-F-04072014,

AUD-M-10072014). Audience members, unless they manage to stay together in spite of the performers' attempts to separate those arriving together, thus emerge with divergent narratives and experiences (AUD-F-03072014, AUD-M-01082014).

7.2 Building and dressing the set

Braidotti defines contemporary machines as “no metaphors, but [they are] engines or devices that both capture and process forces and energies, facilitating interrelations, multiple connections and assemblages” (Braidotti, 2013: 92). In this light, a Punchdrunk production can be regarded a ‘contemporary machine’ incorporating human and non-human actors, including the roaming audiences that connect and create stories within the environment through exploration. Punchdrunk sets are interactive assemblages of human and technological material processes, rather than backgrounds or frames for performance. In support of immersive states during durational exploration by freely moving audiences, the company uses extreme depth of detail to extend experience potential:

[...] you might be doing ten processes that no one is ever going to notice, but if it catches one person's attention then it's worth it, you know? And there's lot of stuff that we kind of design completely and it ends up being in the dark [...] (COM-F-29072014)

The physical set comprises two main parts or layers; the structures that shape and define the space, and the surface treatment or dressing. The structural elements support the physical and psychological immersion of the participants through spatial distortions: narrowings, openings, extensions, curvatures, elevations and descents, exerting dynamic forces on the bodies of performers and audiences to inform the two choreographies (one that is under direct control of the company, and the ‘mirror’ one of the audience that relies on indirect stimuli) that are enacted by the two groups of physical participants (COM-M15092014). Taken together, the spatial dynamics extend experience capacity through scope and disorientation, while the dressing adds depth to experience potential through detail, texture, and affordances for interaction and investigation.

The distributed agency that allows for the creation of this extreme level of detail is aided by discursive practices that generate a shared aesthetic and reinforces the image of the storyworld. This is expressed in enactment of characters within the storyworld during the making of set details:

We did a workshop a few months ago, and one of the ladies there was describing the process of design as ‘method designing’, so you kind of embody everything that you do, so... you know, Badland Jack, how would he write a letter? Scrawly...like...it would all be kind of frantically put together, a load more would be put on straight, you have to do that for every kind of item that you do, to make it exist properly (COM-F-29072014).

The dressing includes large objects; e.g. trees, cars, caravans, cinema seats, large volumes of sand and foliage, through to small and medium-sized objects; e.g. books, trinkets, clothes,

letters, furniture, drapery, decorative lighting, pictures, and any props used by performers. The dressing is collected, created and customised from a wide range of materials including wood resin, plastics, paint, plant materials, wax, textiles, paper, books, furniture, organic materials, and found materials. Vast amounts of material are needed to create sufficient depth of detail to support psychological and sensory immersion in the set (COM-F-29072014). The sets allow participants to exploration nearly to the depth of physical reality outside the performance space (COM-M-21072014, COM-F-29072014). An exception in *The Drowned Man* was the desert landscape on the top floor. Arguably its primary purpose was as a symbolic gesture, just like the Red Moon Motel sign half submerged in a sand dune was a metaphor for the nuclear testing that took place in the Nevada desert from the early 1950s (COM-F-29072014), but the environment suggested a landscape within which performers and participants moved. The relative foreignness of desert landscapes, in comparison with the semi-urban, architectural and movie set environments created for the rest of the set, pushed this particular illusion to the edge of believability. Even so, participants, when asked about the degree to which they were aware of the edges of the illusion when experiencing the performance, maintained that this only occurred occasionally (AUD-F-03072014, AUD-F-04072014, AUD-M-10072014, AUD-M-11072014, AUD-M-01082014) and that they then chose to remain within the illusion; taking on shared responsibility for maintaining the suspense of disbelief:

[...] it was the most beautiful installation, but it was not a space I wanted to be in, it was very much a space that I felt I just had to pass through, because if you look...too many of the details, you'd start seeing, you started seeing how that space works, like what are the... How it was technically created (AUD-M-10072014).

This sense of shared responsibility was also perceived as a social contract, which was upheld by the participants in this cohort even with the anonymity created by wearing masks and the often intense desire to take souvenirs:

That was what I thought about taking, but I...I was like "Oh, I wish I could take this" but how could I, because someone else wouldn't have that experience. No, I'm glad I didn't. But I was like "Oh, I'd really love to have this" and then I didn't...take it. But there was a... No, I didn't... I mean... Only with my eyes, that's the best way I can say it. Like, really like "aaaargh"...only with my eyes (AUD-M-11072014).

Only one interviewee said that they removed a part of the set (a small paper card), and in association with this they expressed a sense of guilt ("I think I maybe took one...which I shouldn't have done") (AUD-F-04072014). The design team factors in the occasional disappearance of small and easily reproducible items, like the paper card referred to here, although this does not extend to non-reproducible set details. Even so, only this one interviewee admitted to taking anything.

Over 500 people contributed to the build and run of the production of *The Drowned Man*, the majority of which working with set design, build, and stage management (COM-M-27092014). Design plans were drawn by Bea Minns and Livi Vaughn in consultation with the

directors, and distributed for development and implementation to design and build teams. *The Drowned Man* had a short build period due to the short notice given to the company when the building became available – five months (February – June 2013), which for a build of this scale enforced a demanding production schedule (COM-M-29072014). The build of *Sleep No More* lasted four months (Nov 2010 – early March 2011) and involved the formation of a local build team in New York under the guidance of company members from the UK. The scale and timeframe of the productions (170 rooms in *The Drowned Man*, and over 100 rooms in *Sleep No More*) requires efficient communication, and although this does not appear to be formalised in detail, permanent members of the company have developed heuristics and methods of communication that allow for rapid transmission and effective communication.

This organisation relies on distributed agency, communicated through micro-interactions informed by the meta-narrative of the company (COM-F-29072014, COM-M-27092014). This meta-narrative is largely non-verbal and informed by the aesthetic of the company's physical processes. Internal communication is thought of as intuitive by team members, and is based on experience. Ideas are expressed not just through words, images and drawings, but also using other modalities, including mouthed sound-making:

[...] we both articulated what we were going to create by sounds, but it's a sound that imitated a characteristic of Bea, and it was just interesting because there is such a short hand now [...] I think I've been taught these aesthetics, but I don't, it's not an imitation, so it becomes your own. (COM-F-29072014).

The meta-narrative, expressed through the aesthetic, processes and organisational structure of the company, supports the thickening of networks that form more compact planes of consistency (Deleuze and Guattari, 2004: 45-49) and allow teams of this size, comprising skilled freelance company members and volunteers, to coalesce on short notice to deliver very occasional, large productions across diverse geographical locations, with no permanent company 'home' apart from the small office and the stores on separate locations in East London.

It gets completely... it becomes your world, and you dream about it, and it's all you think about. And that's...yeah, you're doing stuff for the company, but because you've got that independence of creativity, it becomes your own, and it makes you want to invest in it... (COM-F-29072014)

The desire to contribute to the work of the company without regard of boundaries between company and self is here attributed to the agency that is afforded individual contributors within the meta-narrative. The use of the term 'family' describes a sense of belonging that is also reflected in the frequent references by the interviewee to a shared aesthetic and language, yet this interviewee also often refers to the company from an outside position, indicating a tension between the experience of belonging and the ephemeral nature of the organisation in physical form (COM-F-29072014).

The personal experience of being within the company, supported by the discussion of characters and storyworlds as already real, creates an aura that holds the world outside the company and the performance space at bay. The storyworld, as indicated the above quote, “becomes your world” (COM-F-29072014). Here, a reading of the entirety of the buildings that house Punchdrunk performance spaces from a perspective informed by Bachelard becomes relevant. A building can be imagined as a “vertical being” that “appeals to our consciousness of verticality” (Bachelard, 1994: 17); a being that through challenging gravitational pull defines a dualism between rising and falling and, at the same time, through its external, singular form appeals to our “consciousness of centrality” (Bachelard, 1994: 17). Within the external skin of buildings, Punchdrunk encode performance spaces characterised by lack of centrality and illusory extension and dissolution of the external boundaries of the space. This imagining of the building according to Bachelard’s post-Cartesian epistemology echoes Hayles’ definition of the posthuman (Hayles, 2002: 319), containing its own spatial entropy.

The nature and situation of the buildings in which Punchdrunk actualise their work contribute to this analogy. *Sleep No More*, which opened in 2011 and is still running, takes place across the six floors of a vast block of three adjoined warehouses in Chelsea, New York, previously a commercial district, now gentrified. The locale was renamed The McKittrick Hotel for the production and overcoded with a new and intriguing history, distributed widely via second-hand accounts online, that ties in with cinematic and 20th century history. The symbolic architecture of the building is embedded in the complex urban landscape of commercial development and cultural shifts, within which the façade, or skin, of the building and its situation on the street grid of New York are the only elements that present a unified vision. Internally, the illusion of singularity maintained by the skin of the building is challenged by the multiplicity of narratives, played out in loops in over 100 rooms or performances spaces occupying 9,300m² across the three warehouses. The narratives of *Sleep No More* are formed around *Macbeth*, with leading themes of desire, power, betrayal, insanity and murder circling a core narrative of disintegration. *The Drowned Man* took place from early 2013 to mid-2014 in the Old Sorting Offices at Paddington Station, London, a grand Victorian building in which the company used a total floor space of just under 14,000m². The building speaks of empire and an integrated communication system based on central organisation. It is immediately adjacent to a major London railway station, and subject to change due to the Crossrail developments, which is why the run of *The Drowned Man* was time-critical – there was a finite period during which the company could have access to the building. Renamed Temple Studios, the previously open-plan interiors that offered clear vision across vast floors were completely blacked out and subdivided into labyrinthine series of sets-within-sets, representing multiple levels of reality constructs. While one can trace a transcendental hierarchy in the allocation of themes to the basement vs. the uppermost floor made available to the public in the instance of *The Drowned*

Man, i.e. the enacted conspiracies, rituals and orgies that take place in the basement vs. the themes of ego death, renunciation and redemption that shape the upper desert floor, the horizontal planes of the interior are organised differently. The open, pillared spaces of the old sorting office were cut up and folded inward in a de-centred, labyrinthine pattern, disorientating even to those working with the build. The poetics of these spaces are unfamiliar, disorientating, and challenging (section 8.2, fig. 8.1): they engulf, or immerse, the participant in uncertainty both in terms of how to exist or navigate within them and, by virtue of size, darkness and complexity, in regard of their physical extent.

Uncertainty challenges presuppositions of sense, closure, hierarchy, order and the comfort of recognition; all that representation seeks to reinforce. The potential for dissolution within ambiguity presents a threat that includes the fear of becoming-other to the subject that depends on resolution. The theatrical spaces created by Punchdrunk, unlike those read by Bachelard, are not spaces for maintenance or reinforcement of the personal and familiar; they are spaces that challenge and blur the boundaries of the individual without the promise of resolution. Both spaces are, however, immanent and intended for filling. In contrast with Bachelard's home space, Punchdrunk's spaces leave participants with a restless intensity that engenders a mix of euphoria and frustration that is frequently expressed as desire to repeat the experience, participate in further performances, or volunteer to work with the company (AUD-F-03072014, AUD-F-04072014, AUD-M-11072014). The so-called 'superfans' of Punchdrunk, who return dozens of times to the same production, exhibit this in extreme forms (COM-F-29072014, COM-M-21072014, COM-M-29072014). While expressing an appetite for inexhaustible complexity, they are intent on pursuing every possibility offered by the shows, and seek the closure of completion. The pervasiveness of this desire works across both company and audiences. Participating company members who are intimate with the work are not immune to this effect, and interviewed company members expressed emotions of a similar texture (COM-M-15092014, COM-M-27092014, COM-F-29072014). The output of theatre companies is primarily visible in that which is presented to audiences and media but the totality of Punchdrunk's work includes their culture of making and becoming, which exerts its pull on both members of production and audiences. This culture, as a social-material infrastructure, can thus be regarded as a discursive practice.

The top floor of the building where *The Drowned Man* took place, inaccessible to the general public but in consistent use throughout the run by the company, was the design workshop where the making and maintenance of the dressing of the set and interface features took place. Directly adjacent to the design workshop was the control room from where sound and light was managed. If Bachelard's metaphor of the vertical being is applied to the building in full and not just the parts visible to the public, the 'head' was not the desert, with its promise of redemption through devotion and renunciation, but the design workshop and the multimedia

control room. The multi-sensory communication within the production teams via materials, making and devising supports this metaphor, and suggests distributed cognition at work within a makers' culture maintained by constitutive micro-interactions.

Bachelard, in his analysis of Michelet's *L'oiseau*, describes the birds' nest as shaped from the interior by the female, created "by and for the body, taking form from the inside, like a shell, in an intimacy that works physically" while the male bird "brings back from the outside all kinds of materials, sturdy twigs and other bits" (Bachelard, 1994: 101). Punchdrunk work with different externalities: the centre of large cities (e.g. London and New York), where buildings sit within strictly prescriptive grids of ownership and regulation. The organic pressures applied from within, after a building is secured for a production, are applied with dedication to world-building through design and making with what is described as cinematic detail (COM-F-29072014, COM-M-21072014), but which actually goes beyond what is required for a film set, as props are designed to be handled by both performers and audiences. In order to create a counter-pressure of sufficient intensity to generate the desired illusion of worlds extending without regard to the physical boundaries of the space, vast amounts of materials for building and dressing the set, including furniture, textiles, books, period-typical objects and a broad range of small items relevant to the narrative are brought into the building, in addition to more unusual items, e.g. pine trees (*Sleep No More*), tree trunks, caravans, cars, and 3.5 tonnes of sand (*The Drowned Man*). The material weight and thickness of the set generates a grounded intensity that, together with the investment of physical work dedicated by performers and audiences during each three-hour performance, challenges the awareness of external reality.

Following Deleuzian organisational concepts, the non-resolvable, non-linear story arcs or narrative planes without a defined order or hierarchy suggest regions of intensities (Deleuze and Guattari, 2004: 24); dynamic properties that cannot be subdivided, unlike actualised properties, e.g. height or mass. This resonates with the sustained level of attention, arousal and the subsequent investment of effort required for audience members to pursue narratives offering neither explanation nor conclusion (AUD-F-03072014) for the duration of the performance. Repetition is key to both creation and appreciation of the complexity of the narrative system and the multiplication of possible compositions by audience members. The structure in which these narrative planes sit is formed by a system of twelve five-minute story loops in each of twelve performance zones, all of which repeat three times during one performance. This structure gives audiences the potential of experiencing hundreds of possible versions of the performance, according to which sequences are seen and in which order (COM-M-27092014). These acentrically organised platforms do not conform to the traditional dramatic story arc and together form an experience system based on 'stabilisations' of intensity as per Deleuze's regions of intensities, stretching between the virtual and the actual: virtuality in the conditions

of possibility offered by set and performances, which take place whether audiences are present to experience them or not (COM-M-15092014), and actuality occurring in the composition of story undertaken by individual audience members.

7.3 Performance and stage management

Performers initially devise off-site, but begin on-site devising and rehearsing when spaces are developed to such an extent that the shape of the set is clear and performance spaces are safe for performers to rehearse within. The physical performances, as well as the set design, are subject to iteration during the run in response to observations by actors and other company members. Company members participate as masked audience members, particularly during the first months of the run of the production, to observe the movements of audience participants, which are ‘choreographed’ through the layout and lighting of the set and the actions of performers. The audience is discussed as water that can be directed, or as a material: “[...] in terms of moulding that material of the audience, because we knew where we wanted them to be: expected them to be [...]” (COM-M-15092014). Stage managers and stagehands (Black Masks) act as if they are part of the set: dressed and masked in black, they are invisible until they emerge out of the shadows to intervene or guide, using specific techniques to remain within the performance (COM-M-27092014). Audience members and stage managers are masked at all times within the performance space (in white vs. black masks), and the cast is rotated in their roles. This brings the focus of the performance situation, regarded as a whole that includes all participants, to the embodied interaction of broader categories of participants (performers/roles – Black Masks – audience), rather than the presence of specific individuals, ‘stars’ or in-groups. The emphasis of this analysis will be on the constitutive micro-interactions of performers, Black Masks and audience that direct and shape the experience and the actions of participants in lieu of the organisational features of proscenium theatre.

The temporal linearity of language expression relates not only to a succession, but to a formal synthesis of succession in which time constitutes a process of linear overcoding [...] (Deleuze and Guattari, 2004: 69).

The acting or performance in *Punchdrunk* shows, although the sets are richly laced with text fragments, is largely wordless. Spoken dialogue is limited to single, hardly audible utterances, supporting the acentric narrative structure and the simultaneous extension of story time in all directions within the building.

If we were using dialogue and stuff, the dialogue is too on the surface, makes things too clear, too apparent. There’s too much, you know... laden with information. That kind of...it doesn’t work at all (COM-M-15092014).

While *Sleep No More* contains little more than near-inaudible murmurs by the actors, *The Drowned Man* featured some pre-recorded voice-overs by the character Leland Stanford, the director of Temple Studios, around whom a net of self-exploitation performed by other

characters in the play was formed. Both *The Drowned Man* and *Sleep No More* explore themes of power, and the abuse of power, but rather than the raw brutality in *Macbeth*, the abuse of power in *The Drowned Man* was actualised through the desires of audiences and actors within the story, and highlights the detached, even frivolous, commodification of participants in a fictional representation of the Hollywood studio system. Through their desire for prominence within this system, participants were driven to self-exploitation while studio executives could maintain a seemingly uninvolved role in this pursuit. Sam Booth, one of the long-term company actors, discussed Leland Stanford in terms suggesting the relative emptiness of his character:

I didn't have a story myself, I was influencing numerous other peoples stories; you follow me, you don't get the story of Leland, you know, you just get him... he's concerned with Wendy he's concerned with Frankie, Delores, Romula, Lila, you know... that's it. But he's going from one to the other of those stories; he's going between those stories, you know, having a sequence of impacts on them. But without a real...he's not really got a real story (COM-M-15092014).

Through 'not having a story,' the character of Leland Stanford was simultaneously nowhere and everywhere, exerting a persistent influence on the fates of other characters. In this emptiness, the character represented the mediation of the medium itself and the system in which the medium was produced, and the depersonalised continuity of the studio system was present in the form of his pre-recorded voice uttering directorial instructions from a movie set.

The deprioritisation of dialogue and the linear structure associated with dialogue necessitates that physical performance carries the narrative. The majority of performers are dancers as much as actors, and the choreography demands significant strength, coordination and skill from the performers. In one of the hotel lobby scenes in *Sleep No More* the performers climbed and bounced against the walls, and the banquet scene in the great hall was played in minutely coordinated, extreme slow motion. The choreography had been devised so that performers appeared to be battling limits in space and time; embodying the psychological contortion of their characters as they vied for power within the social structures within the drama. Lady Macbeth's solo inside a glassed room in her chambers was a display of force, frustration and seduction, and as the actress walked through the crowd after the performance, the after-effects of her physical effort was evident through radiation of body heat and sweat. This close-up intensity is more typical of film than stage acting, as proximity allows audiences to experience detail that would not be discernible from a distance. The level of detail sought by the company is usually discussed as cinematic and the acting is devised with the same perspective in mind, but going beyond the visual into the embodied:

It's why I think the dancers are ideal performers for this work, because a lot of actors, who've been used to work with traditional theatre or film or something; you know, have gone through a normal of acting training.... often would play too big. And they're emoting and narrating too much. And there's not much room for the ambiguity or... for the audience to... what I think draws the audience in is the reality of, you know,

voyeuristically observing the people, and you infer character form observing actions (COM-M-15092014).

Acting in Punchdrunk plays differs from traditional stage acting in several ways. There are no visible elevations where audiences are disallowed, there is no or little spoken dialogue, and there is no given physical distance between actors and audience. Instead, actors use physical signals to clear spaces, direct audiences and shift the boundaries of the performance to include or exclude participants:

[...] you can't take in that picture in any one gaze. The audience has to look this way and look that way, but without Wendy's presence there: seeing the orgy through her eyes, because her looking at it, and actually my character looking at her looking at it; that's where the meaning of the situation is. [...] you can tailor the pitch of your performance to their decisions so that if they come very close, even if you're still playing the game of invisibility with them, or you know, you're keeping up this pretence that you can't see them [...], so you might, if you have the leeway, you have the liberty, you might decide to bring the pitch of your performance down to a very subtle, close up kind of level, so that you're giving them something that they know is just for them. It's a gift, you know, a small gift, you might improvise something that's very... in response to their closeness (COM-M-15092014).

Managing the attention of audiences within a space that allows audiences to move at will on the same level as the actors requires the actors to simultaneously act and direct the audience as 'co-performers.' Methods for this are developed through devising and sharing the responsibilities for managing the performance situation with other actors, as well as with set and technology designers:

It's always an unpredictable thing, but the... what we do, is our timings and our movements and the directions of our gazes to direct what the audience are aware of, how they behave, you know, makes all the difference. The audience is very directable and... manipulate.... and, to manipulate them, sometimes you just have to have a character like the Diva PA, who's, you know, got that job, OK you decide, you know: it's your job to like clear this area. You need to you know, while this point in the... music, you need to clear this you know, but getting this precision, by precisely arranging the performance, and you know, with help from lighting and stuff as well obviously, direct the audience to be where you want them to be (COM-M-15092014).

The exceptions to performance based on physical language are the one-to-ones, performance situations where the actors interact with and speak to one participant at a time. This, in combination with the removal of the participant's mask, calls on the presence of the continuity of the participant, i.e. the subject behind the mask. The suddenness of being revealed in this fashion engenders a confrontation not only with the presence as 'oneself' but also with the close proximity to an actor who addresses you directly within a small, enclosed space. Although one-to-one experiences are thought of as 'interactive' and often described by participants in words that suggest domination or transgression (e.g. "dragged me into a room", "forced an orange into my mouth"), they are tightly scripted and carefully negotiated, with minimal physical interaction from the performer to achieve the desired results:

I *know* with the Drowned Man one-on-one in particular, what I did every time from the beginning of the run to the end, was that I would unlock the door, push the door open and then sort of look at the floor. And I would wait for them to go in, and if they didn't go in, I would just maybe do a little tilt of the head, but I wouldn't even be doing eye contact at the point. Definitely not physical contact. [...] What you're trying to do is have the maximum possible impact with the minimum possible expenditure of any energy, of force (COM-M-15092014).

Audience participants experience these interactions as forceful; for them they are unique and unexpected phenomena. In contrast, the performer who participates in the same situation is repeating a scripted event, albeit never identical. Micro-improvisations occur during the course of the run of the production, and those that are deemed successful are incorporated as part of the routine. This in-show devising in the form of micro-interactions can be regarded as derivative change, or 'difference as dx ,' drawing on the Deleuzian understanding of difference as constitutive of identity, rather than dependent on identity (Bignall, Bowden and Patton, 2014: 31). Repetition, as the extrinsic difference between objects represented by the same concept (Deleuze, 2014: 31), thus offers a model for the practice of the performer seeking to optimise a crafted routine in response to circumstances that defy full control. "In every respect, repetition is a transgression. It puts law in question, it denounces its nominal or general character in favour of a more profound and more artistic reality" (Deleuze, 2014: 3):

Because of course, it's theatre, like any theatre, and you want to create this illusion of repeating universe, this closed universe that repeats itself. But also the audience is excited by the fact that it's live. The audience is excited by the fact that it's happening now, and it's that tension, one of many forms of tensions, that is interesting, and exciting for the audience. The fact that it is different each time, each scene is different each time, even if you are aiming for it not to be. Because it's theatre, and it's live, and it's messy and the audience is unpredictable, so you kind of can't help it that it's different on the third loop from the first loop, it's a different kind of energy. [...] You know, the show wouldn't happen, or it wouldn't be as good as it was, if it weren't for people creating *in performance*, and making these discoveries with each other. It wouldn't have any of that fantastic position, because we wouldn't have had that many details. Most of the details would come from experience of performing the show, and then they become decisions that are set, but at the same time it's not an improvisation of the show (COM-M-15092014).

Described here are processes of difference or participatory becoming that emerges from the situation itself, rather than from transcendent thought. This immanence or univocity stands in contrast to Cartesian dualism, with its idealised fixity of identity and separation, and evokes that which unites all Being as "not one *thing* at all, but process, change or difference" (Cull, 2012: 7).

The Black Masks are stagehands and stage managers, but they participate in narrative regulation through direct interaction with the audience as and when required by the situation. They perform an integrated role in the show as interlocutors between actors and management, supporting adaptation to changing circumstances, as well as regulating audience behaviours in response to the expressed needs of individual actors (COM-M-27092014). As a participant, you

rarely see the Black Masks. They are completely dressed and masked in black, which, in the very low lighting conditions presented by most parts of the set, allows them to stay hidden even when you walk close by. The surprise element of their sudden emergence out of darkness adds to the ambiguity of the edges of the storyworld, as you suddenly realise that you may have been watched throughout, when you thought that you were on your own. The way the Black Masks present themselves extend the boundaries of the performance rather than impose limits. They are, until they reveal themselves, invisible watchers whom you realise have been there all the time only as and when they step out of the shadows. This engenders a kind of vertigo, as the boundaries of the structure within which you think you roam freely and unseen are revealed to be porous and dynamic. The set is no longer inanimate, but alive with hidden agents who can intervene to direct movements within and interactions with the set or actors, and prevent undesirable transgressions by audience members:

And how easy you can move an audience member, or get them not to do something - just by shaking your head, making eye contact and shaking your head, and they'd put the prop back. And you couldn't talk to them either; it's all sign language. It's really clever. So instead of going up to someone going "you can't keep that prop that you just put in your pocket, can I have it back, please", you sort of go up to them stand in front of them; make eye contact and just hold your hand out (COM-M-27092014).

Audience members occasionally try to remove parts of the set (COM-M-27092014), and although tolerated and taken into account when items are replaceable (e.g. notes or letters), such actions are monitored and, when necessary, prevented. While the company endeavours to keep participation non-prescriptive (COM-M-21072014, COM-M-27092014), moderation is necessary. The regulation of audience behaviours is approached from within the aesthetic of the performance, with the intent of maintaining the illusion. The pace and style of movement adopted by the Black Masks when making themselves visible to audience members is a key part of not disrupting immersive states. They receive training in how to move, and how to move and control the movements of audience members without "breaking the wall" or "pulling them out of the show" (COM-M-27092014):

And there's a way that we were trained to... how us in black masks moved around in space. So you don't walk with the usual gait. Very slow and sort of within keeping with the show, you know, slightly mysterious, or slightly a bit of an enigma, in a way. And you want to blend in, so if you start, you can't run: if you run or walk quicker than normal, you stick out like a sore thumb (COM-M-27092014).

This reinforces the perception that the Black Masks are articulated extensions of the set, or, more precisely, the darkness held within the set. Being dressed and masked in black, they are normally invisible to audience members, and only become visible when they step out of the shadows to guide behaviour:

It's very calm; almost like someone's about to brush past you. And then you can... what we normally do, is going up behind them, hands on their shoulders and grip, and just gently pull back, and you get them to move. [...] And there was another thing

where if you wanted to walk with someone, you could sort of run... so, put your arm down, just put your arm down by your side. You would do that and just lead them, keep that elbow contact, so all your forearm is touching, rather than leading them like kids in primary school. You're keeping them quite close to you, and you would be able to steer them as well, with that forearm contact (COM-M-27092014).

Specific techniques are used to lead or direct audience members while remaining within the storyworld. As described in the quotes above, such guidance is not communicated through conventional semiotic gestures (e.g. taking an audience member's hand) so much as through bodily signals such as pressure applied to the lower arm or shoulder of the audience member:

So, that was really interesting; how the psychology of getting an audience member to move... it was quite clever. And as long as they feel safe, and they don't feel like you're, if you do that [demonstrates], then suddenly they're not in this magical created world, it almost like flicking channels on a television. "Hang on, I was watching that, what are you doing". There's always an initial like, "I'm being moved, I'm being moved" and you can feel it. So you could move someone by the shoulders, and then if you wanted to...if you... instead of saying, "stand here and you'll be safe," all you had to do, was just push slightly down on their shoulders as if to say "I'm rooting you to the spot" (COM-M-27092014).

Semiotically, the use of physical pressure together with the black clothes and mask aligns the Black Masks with the walls of the set, which are painted black in order to recede into the shadows, and shape the space in ways that create and release pressure, supporting the mirror choreography described under 6.2, above, and below. Through being embedded within the set, the Black Masks not only create a sudden, vertiginous sense of having been watched while unaware; they also challenge the distinction between human and non-human. The set, made 'live' in this fashion cannot be regarded as being there for participants to territorialise or appropriate. As hidden agents within the set, the Black Masks bestow on the environment the potential for subject-object position reversal and enhance the power of the performance milieu to overwrite (or overcode) the participants' personal narrative.

In taking control over the movements of audience members, Black Masks create uncertainty about agency, which enhances the dreamlike qualities according to several participants. One interviewee commented on the tension between embodiment and passivity when they were being subjected to the 'overcoding' of the Black Mask, and remarked on how this, in combination with the anonymity afforded by their own mask, created the sense of being in a dream:

Yeah, I was just really, I don't know, it was just amazing. It was so surreal, it was like, the most surreal thing I've ever done. It was very dreamlike...erm...it was dreamlike without being pretentious. Without kind of trying to be dreamlike. I genuinely felt, with the mask on, completely passive. That was a really new experience for me, feeling completely passive. Also, while walking around, and you know, like, your body is really active but you're not expected to intervene unless asked, and.. and I remember at one point I tried to cross, erm, cross a room while the actors were dancing, and.... You know, after being told "explore!" like this, I thought "I will just cross the room," and I actually got stopped by, erm, one of the...kind of 'bouncer'... not bouncers but the kind

of people, and like, physically stopped. They were like “you can’t pass the room right now” (AUD-F-03072014).

The connection drawn between passivity or submission and a dreamlike state suggest that the experience of being overcoded or overwritten can shift the participant’s state of awareness. This exemplifies the potential for becoming-other (Braidotti, 2013: 3), with the associated risk of dissolution. Unrealised fear is a part of the sublime as defined by Lyotard, i.e. the “secondary privation of a threat” (Lyotard, 1991: 99), and through their lack of visibility and the manner in which preventative interventions are formulated to remain within the performance aesthetic, the Black Masks contribute to the sublime by optimising the tension between fear and safety. Such qualities are also inspired by other components, including set design, lighting and music, and not limited to the experience of audience members; Black Masks who worked regularly with *The Drowned Man* also experienced fear to the extent that certain rooms were avoided (COM-M-27092014):

Well, you know if you’re standing in a really dark room, and the music is really scary, and your imagination starts to run away... Like, I’ll say most of the stage management team didn’t like being in the basement during scenes one or two, especially at the start of the show: there’d be no audience down there, it’s really f**king dark, and then the music is going “dzummmmmmm...” (COM-M-27092014).

As performers, the Black Masks operate on, and extend, the ambiguous boundaries of the set. In this, they contribute to engendering the sublime, even while they establish boundaries for in-system behaviours. Their hiddenness creates uncertainty of what is permissible, what you are observed doing, and how far they would go to control your actions while remaining within the performance aesthetic. Interventions are formulated to align undesirable audience actions with the aesthetic, resulting in reinforced inscription and an enhanced sense of the sublime rather than expulsion from the storyworld.

Although a free-moving audience cannot be fully controlled, the movements of audience members are anticipated and guided by an unseen mirror choreography based on observations of the movement of crowds within the performance spaces. Members of the company take part in the audience for the first few months to study audience behaviours, and adjustments to the set or the acting are done throughout the run to optimise the performance (COM-M-15092014, COM-M-27092014, COM-F-03122014). In devising the mirror choreography for the audience as co-performers, they are regarded as a material with certain predictable properties that allow designers and performers to direct their actions. This relationship to the audience is discussed using engineering as a metaphor, echoing methodologies formed in relation to the manipulation of a physical world characterised by extrapersonal forces and tensions, and including perspectives from software engineering, where users of interactive systems are processed as code objects with statistically observable properties:

We are learning what we need to do given that people are reliably, predictably kind of behaving in certain ways. [...] They're like water or something, and we have to design this aqueduct, or, 'ok we need to put a thing in here, you know, just so that it can go along there'... and it's like you're civil engineers, putting up structures, you know: installing systems of... to direct that flow, or to block it, or to do whatever. But the property of the water is a constant: water behaves in a certain way, you know, for whatever reason. You start to realise that people, individuals, and a body of people an audience, do have certain predictable characteristics in terms of the way they flow around the place, or the way they respond. You know, you can always be surprised but...(COM-M-15092014).

As in machine learning, behaviour within a human interactive system is defined and categorised for the purpose of determining appropriate responses. An important difference between the human interactive systems constructed by Punchdrunk and digital interactive systems operating according to monetisation models based on demographic profiling (e.g. Google, Facebook) is that anonymity is preserved across time in the former, which places the emphasis on behaviour in the moment, and how this is registered, interpreted and incorporated in interactive processes. Categorisation and subsequent choices regarding interaction are instead based on in-system behaviour:

Yeah, I mean you can tell a lot about people, I mean you can't see their face but so much is communicated with the body. You can tell if they're an interested, curious, and active audience member from the way they're standing, and where they're moving and where they're looking. If they're looking at you, then they're interested in you, and you're more likely to invite them into the room than someone who's more over the side of the room sort of going through the drawers. Why would I choose you? I mean you're doing your thing, or even someone who's just looking around or someone who's looking at you, yeah... People are very expressive with their bodies. If you wear a mask, you.... as a performer, you learn how to express all sorts of emotions by putting the head tilted this way, sympathetic this way, all of, this is, there's so many... combined with gesture and stance, you know (COM-M-15092014).

In contrast to engagement engendered through personalised search results and advertising based on demographic profiling, the challenge of meaningfully engaging anonymous participants is approached through the use of dramatic devices, also contained within the particular situation:

It's creating the illusion of drawing them into the world. You do that by kind of giving them a role to play within it. You've kind of cast them as a certain character; you create the illusion that they've been chosen for this scene for a reason, because... Oh Felix, you remember, he once described the idea of projecting a face onto the mask, and you know, you see something in them that makes you choose them for that one-on-one situation (COM-M-15092014).

Interactions carry within them traces of structural principles extending beyond the situation, but participants are afforded fluid identities. Having called on the participation of an audience member as a fluid identity, the ensuing interactions belong within the generative and differential (and postidentitarian or posthuman) rather than the hierarchic relationship that is inherent in systemic personalisation based on demographic tracking and profiling. The detail and texture of

actions contained within the situation determine responses, and responses are incorporated into the devising processes of the performers.

By assigning the participant a role, the actor not only shifts the comfort zone of familiar positions and expectations; they also create ambiguity regarding agency, and how much the storyworld could potentially impose on the participant:

It's an illusion obviously. But, what you're trying to subvert is the reality of the situation, namely that they are an audience member who's bought a ticket, and you are a performer, whose job it is to entertain them, so you're... I'm always at pains to try to subvert that reality by not being overtly entertaining, particularly when in a one-on-one; trying to, you know, using things like, you know, not doing... ignoring them for a bit, or just having a bit of a gap, silence and just sort of, or doing something that is not clear what... they can't see it clearly enough, or it doesn't really concern them. [...] it's like as if you have to, kind of, scare them as an artist before you scare them as a character, so that they're, you know... that's truly disorientating. If you put them in a position where 'I don't know why, what they're thinking... I don't know why this person is doing this, because it doesn't seem like its calculated to be entertaining to me, and I don't now who I am, and I don't know who he is anymore.' then it starts to feel real. [...] You need to unsettle them as a performer, as an artist, to unsettle them as a character (COM-M-15092014).

For exchanges that effectively direct the mirror choreography in these circumstances, both actor and participant are dependent on the precise detail of the interaction. As with the detail in the set design, which also emerges out of communication, the required degree of precision and responsiveness emerges as a layered process:

Because the details are so... the wrong detail could shatter everything, and the right detail could.... You know, the wrong word is like playing the wrong note in the key, it just doesn't... but then the right way can be so suggestive: just draw you into that world in such a powerful way. But it's just... all about details and accumulation of many many many many many many many many details, and many many small decisions, and the decisions that haven't been made, as well, the decisions to not do something: that would be the expected thing to do. The notes that we aren't playing, or beats that we aren't playing, those are really important decisions (COM-M-15092014).

The many details, and the "many many small decisions" discussed here are part of a cumulative process, constitutive of the interaction: changes that optimise the interaction are added to the routine that the performer seeks to repeat. In-show devising thus exemplifies the differential processes of change and becoming discussed by Deleuze as real thought in embodied form.

The discussion of process intensity and other key features of Punchdrunk's work that have been examined here will be applied in the next chapter to the analysis of audience experience.

Chapter 8: Experience and participation

The previous chapters analysed the production of space and embodiment in the making of Punchdrunk's work, guided by the theories of de Certeau (1998), and embodiment as applied by Cull (2012), Hayles (1999; 2002) and Braidotti (2013). In this chapter these perspectives will be combined against a background of Deleuzian thought for the purpose of an analysis of audience responses and behaviour extracted from interviews with *The Drowned Man* participants.

8.1. Immanent conditions of possibility

Participating audiences in Punchdrunk's work are co-creators in that they are not presented with a composed narrative, nor are they guaranteed a coherent story. Sense-making is instead an active and embodied practice that they may or may not engage in, with the possibility of failure resulting from not doing so present at all times. The audiences members interviewed here engaged with Punchdrunk's work through physically enacted, sometimes exhausting (AUD-F-03072014) interrogation of the space. Some responded to the implicit challenge posed by disorientation that was described in interviews (AUD-F-03072014, AUD-M-11072014, AUD-M-01082014), or in response to a sense of 'mystery' or curiosity (AUD-F-04072014, AUD-M-11072014, AUD-M-01082014); all reflected in interviews on their sensory and direct experiences of the space, the performances, and their own responses in the situation. A proportion of audiences do not engage; the analysis of reviews of Punchdrunk's *The Drowned Man* and *Sleep No More* on the social network platform TripAdvisor suggests that on average approximately 15% of audience members have negative experiences and dislike the responsibility to hunt for and compose their own narrative. A comparatively small number (~5%) leave neutral reviews, while the remainder leave positive to extremely positive reviews (see section 8.2, below). The reasons given on TripAdvisor for disliking the experience, and the ensuing refusal to engage, are frequently described as feeling challenged and disorientated (TripAdvisor, 2015a; TripAdvisor, 2015b). As can be seen below (fig. 8.1), these experiences overlap those that drive engagement, albeit framed differently. It should be noted that audiences to Punchdrunk performances are self-selected, and generally have some information regarding the presentation format. Questions arise from this observation of how audience members think about their agency in relation to the production of experience; how they balance the responsibility for possible failure of 'having' a satisfactory experience; and how they respond to uncertainty of circumstances and outcomes, suggesting Bishop's positioning of critical audience participation in a field between "opposition and amelioration" (Bishop, 2012: 12).

Bishop discusses participating audiences in a light informed by Benjamin, de Certeau, Deleuze, Bey and Debord, of which de Certeau and Deleuze are directly referred to in the

analyses undertaken here. The distributed narrative, in which the participating audience member takes an active and curatorial role, and the physical circumstances presented by the sets create emergent story spaces that become unique to each participant: the experience extends and unfolds according to conditions that are presented in immediate terms and at close range. Deleuzian concepts of the encounter, difference, immanence and transcendence resonate with many of the themes emerging from the research presented in this thesis, and the discussion of the relationship between subjects and events that features in much of Deleuze's work form a background to the analysis of audience experience in this chapter. Furthermore, de Certeau's perspective on space and place (discussed in chapter six), and key aspects of the posthuman discourse (as discussed in chapter seven), converge with Deleuze's critique of totalising thought and the transcendent perspective. In this chapter, I combine the posthuman theories of Hayles, Braidotti and Cull and de Certeau's theory of space and place within a Deleuzian framework for an analysis of audience experience and behaviours in relation to key elements of Punchdrunk's work.

The spatial aspects of the transcendent subject-event relationship and the 'dogmatic image of thought' represented by the *Cogito* are challenged both in the making cultures of the company and the designed experience. At the most basic level, this is a function of the design of the performance space, which differs structurally from the proscenium stage. On a sensory level, the experiential space created (as a composition of performance and set) is immanent, and designed to be experienced at close range through multiple sensory modalities, including the haptic. The difficulty with which you orient visually, and the deliberately disorienting structure of both the space and the narrative, make impossible the optically oriented overview perspective that is inherent to the transcendent subject position. The challenge of the hidden transcendent, i.e. the undeclared assumption of a subject position external to the situation considered, is carried by posthuman conditions of making (as discussed in chapter seven), and by the structure of the experience, as presented to the audience. The story space offers audience participants the opportunity to become story-vehicles and venture on a quest for narrative without given solutions. Section 8.2 in this chapter focuses on this latter aspect and is undertaken against the background of Deleuze's analysis of Artaud, and the critique of foreshortened, or dogmatic, thought that is intrinsic to the transcendent perspective (Deleuze, 2014: 203). In this critique, Deleuze argues that the formation of problems in relation to their solvability inevitably results in self-reinforcing queries and discursive loops, which he contrasts with the open-ended or 'difficult' approach that, according to Deleuze, is constitutive of creative thought (Deleuze, 2014: 209-210).

The analysis of audience experiences from participation in open-ended vs. closure-seeking interactive enquiries in section 8.2 is followed in section 8.3 by questions regarding the posthuman subject position in relation to the practice of masking, which is imposed on

participants as well as Black Masks. Situating the audience as ambiguously bounded subjects predisposes them for participation on immanent terms: experiential and close range, resonating with the subject position in dynamic and emergent space (*espace*) as defined by de Certeau, and with Deleuze's nomadic or smooth space. Furthermore, the sets are built to disallow vantage points for surveillance. The near-darkness and labyrinthine performance space enforce a close-range perspective with intensely layered detail and a degree of resolution that is on par with ordinary reality. The masks that are given to participants to be worn during the entire performance (unless removed by actors in one-to-one experiences) contribute to the limitation of vision through narrowing the visual field, and deprioritise quotidian identity. The temporary loosening of the inhibitions associated with the day-to-day identity and the limitations to vision-led control over the circumstances encourage close and emergent engagement with the designed environment. De Certeau's close-range spatial perspective thus combines with intermezzo practices in a dynamic space, where in-between journeys connect points, cross trajectories and negotiate a landscape of events that cannot be 'completed' or fully contained within the performance experience (Deleuze and Guattari, 2004: 419-420).

8.2 Participant experience

Punchdrunk's theatre employs a wide range of dramatic devices that engender disorientation in their audiences. As indicated by participant data presented in this chapter, the persistence of acentric principles that underpin these methodologies and the resulting disorientation carry over to the participant experience. The stated goal of the company is to create situations that call on participants to act, explore, and investigate without the certainty of a coherent or satisfactory experience, and that they do so actively through embodied participation within the performance environment. The focus on micro-interactions in both set and acting steer or draw experience into close range, which positions audiences, actors and set on a shared, precarious and emergent level. Audiences arriving to a Punchdrunk show are generally aware that they will need to be physically active, and they are encouraged to assume agency prior to the performance, but the duration of the event (three hours) necessitates continued reinforcement of participatory principles. Expectations of a traditionally presented theatre experience will result in disappointment, which occasionally happens, regardless of information received about the company by word of mouth or publicity. Reviews by lay members of the public tend to be polarised. Analysis of the TripAdvisor page for *The Drowned Man: A Hollywood Fable*, show (at the time of sampling) that 78.9% of visitors (n=109) gave the rating 'excellent' or 'very good,' 16.5% of visitors rated the performance as 'poor' or 'terrible,' and only 4.6% gave the rating 'average' (TripAdvisor, 2015b). Similarly, on the TripAdvisor reviews for *Sleep No More* (n=599), 81.0% of lay reviewers gave the rating 'excellent' or 'very good,' 10.5% 'poor' or 'terrible,' and 8.5% giving the rating 'average' (TripAdvisor, 2015a). Commonly, those who

disapprove found the shows confusing, disorientating, alienating, disorganised, uncomfortable and tiring, and expressed preferences for seated theatre experiences where they were not separated from their companions and were not required to wear masks (TripAdvisor, 2015a; 2015b). Approximately 80% of the combined participant samples thus expressed highly preferential views after their visits to *The Drowned Man* or *Sleep No More*, while the remaining 20% were divided between a small number of neutral reviews and around 15% of rejections based on confusion, disorientation, alienation, and discomfort (TripAdvisor, 2015a; 2015b). Live interviews with participants who were highly enthusiastic about the performances were dominated by similar descriptors, including disorientation, confusion, deprivation and strangeness, as well as difficulty and discomfort (fig. 8.1). Such descriptors formed the dominant subset of the total number of descriptors that were extracted from a list of the 1,000 most common words used in interviews with participants who were uniformly positive about the experience. This suggests that the attitude to the challenges presented by the interface, i.e. how these are framed, is what divides audiences, rather than the type of challenge itself. The subset signifying disorientation and strangeness was the largest and constituted 11.8% of all extracted descriptors, with subsequent subsets, in order of predominance, signifying enjoyment (e.g. love, enjoy, appreciate), perceived difference (e.g. different, new, original), and interest (10.0%, 7.6% and 6.4%, respectively) (fig. 8.1). The qualities that make some people reject the experience thus at least partially overlap with those that caused the participants in this study to find it interesting and stimulating.

Descriptor/s of experience	Prevalence
Bizarre, curious, strange, cryptic, confusing, chaotic, lost, deprived, random etc.	11.8%
Love, enjoy, [it was] good, nice, appreciate	10.0%
Different, new, original	7.6%
Interesting	6.4%
Impressive, awesome, incredible, magnificent, unique, extraordinary, etc.	5.7%
Big, huge, massive, large	5.3%
Open, accessible, allowed, free	4.7%
Real, authentic	2.9%
Hard, difficult, uncomfortable	2.8%
Direct, straight, linear	2.6%
Powerful, intense, bold, strong, passion	2.4%
Interactive	2.3%
Immersive, full, experiential	2.2%
[In a] dream, dreaming, dreamlike	1.8%
Live, alive	1.7%

Figure 8.1: The prevalence of the 15 most common descriptor subsets listed above is described as the percentage of the total number of descriptors that were used to qualify the experiences of participants, extracted from a sample of the most frequently used 1,000 words (at least three letters long) in participant interviews that were undertaken in the course of this research.

An analysis of action words describing approaches and attitudes employed within the performance space, extracted from the same list of the most common words used, show that those related to learning, understanding, knowing, catching and finding prevail. Such actions, together with other cognitive approaches (e.g. think, believe, guess) (fig. 8.2), are broadly symmetrical in prevalence to the experience descriptors indicating confusion, disorientation and strangeness, taken together with those describing enjoyment and newness (fig. 8.1), suggesting that these groups of experience descriptors and action strategies were of similar importance to participants. The Punchdrunk audiences interviewed for this study were uniformly positive to the experience, in contrast with the sample taken from online lay reviews discussed above. Although the interview sample was small, it is notable that the dominant descriptors used by interviewees who enjoyed the experience (summarised as experiencing the imperative to respond in an emergent and physically demanding capacity to a disorienting situation with no certain resolution) broadly conform with the reasons given in both highly positive and strongly negative online lay reviews; the contrasting valence appears to be a function of interpretation.

Action words	Prevalence
Understand, know, realise, learn, figure [out], discover, notice, catch, find, hold	18.3%
Think, believe, suppose, guess	13.5%
Go, walk, move, leave, wander, head, follow, lead, run, charge	12.0%
See, look, gaze, focus, view, watch	8.8%
Talk, say, tell, speak, describe, explain, articulate, mean	7.2%
Feel, sense, experience	5.9%
Work, try, engage, challenge, fight	5.9%
Want, need, wish, hope, expect	5.6%
Act, dance, pretend, play, game [as activity]	3.6%
Create, recreate, build, form, devise, design, develop, craft	2.2%
Choreograph, arrange, train, control, manipulate	1.5%
Change, adapt, shift	1.0%
Decide, choose, pick	0.9%
Question, ask, doubt	0.8%
Contact, approach, meet	0.7%

Figure 8.2: The prevalence of the 15 most common action word subsets listed above is described as the percentage of the total number of words signifying the actions of participants, extracted from a sample of the most frequently used 1,000 words (at least three letters long) in participant interviews that were undertaken in the course of this research.

Deleuze's analysis of the Cartesian subject position (Deleuze, 2014: 217) shows that the self-referential 'goodness of thought' is oriented toward closure according to normative constructs within so-called common sense and representation. The encounter in Deleuzian thought, which is discussed by Cull in the context of immanent theatres, replaces the dichotomy of authenticity vs. representation (Cull, 2012: 5), and is fraught with its own tension, the "powers of the leap,

the interval, the intensive and the distant; powers which only cover difference with more difference” (Deleuze, 2014: 190). Deleuze emphasises difficulty as inherent to differential thought in his discussion of the encounter in relation to Artaud’s work. He argues that it is inescapably challenging as it operates on and beyond the boundaries of recognition: “[...] *difficulty* as such, along with its cortege of problems and questions, is not a *de facto* state of affairs, but a *de jure* structure of thought” (Deleuze, 2014: 193, original emphasis). A subset of descriptors found in the sample extracted from interviews with the participants in this study (who found *The Drowned Man* a positive experience) was associated with difficulty and discomfort (fig. 8.1). According to Deleuze’s argument via Artaud, this can be regarded as related to the dominant subset associated with strangeness and confusion, if creative or ‘real’ thought is challenging by nature, and occurs in encounter with confusion rather than recognition (Deleuze, 2014: 192-193). The fifteen most prevalent subsets of action words correlate broadly with the experience descriptors, including those indicating work and challenge in addition to the previously mentioned subset associated with learning and discovery. Three smaller, but relevant subsets described creation, crafting and forming; adaptation and change; as well as questioning and doubt (fig. 8.2). These action word subsets indicate not just a relation to Deleuze’s analysis of Artaud and his conclusions regarding ‘real’ thought, but also the dynamic spatial practices proposed by de Certeau: extensions in response to a given environment, crafting, and adaptation from a close-range perspective. Negative reviewers on TripAdvisor frequently based their rejection on not wanting to be active participants in order to have a satisfactory experience, with some remarks suggesting that they experienced this imperative as condescending or pretentious (TripAdvisor, 2015a; 2015b). These negative remarks are interesting in themselves, as they appear to confirm Artaud’s position in Deleuze’s analysis: differential thought, as opposed to thought based on recognition, is by nature challenging and uncomfortable, and not based on questions formed in relation to their solvability.

Other dominant descriptors included superlatives such as awesome, incredible, and magnificent, descriptors indicating an experience of hugeness in relation to the space, and others related to openness and freedom. These, together with the tacit threat of dissolution that is inherent in confusion and disorientation, suggest experiences related to the sublime and a sense of spatial expansion. The sublime is, according to Lyotard, a function of the secondary privation of a threat, where the primary threat is the vertiginous privation of light, society, language; the failure of reason, and the terror that “nothing is happening, or is going to happen” (Bamford, 2012: 123-124). The delight of the sublime is associated with the vicarious enjoyment of fear via relief, in that that which one feared (the threat of primary privation) is contained, and thus did or does not happen (the secondary privation). The descriptors of disorientation, taken together with the conditions created within the sets (e.g. audiences are masked and disallowed speech, the sets are dark and labyrinthine, there is no clear sense of progression) and the risk of

‘failure’ referred to by one interviewee (AUD-F-03072014) suggest the Lyotardian sublime at work. The audience segment who responded strongly negatively to disorientation, approximated to 15% based on the TripAdvisor reviews (TripAdvisor, 2015a; 2015b), often referred to rejection or frustration in response to what they felt was a demeaning or disempowering experience that ‘made no sense’ to them. This implies a judgement of failure in relation to the experience, and suggests that some audience members are dissuaded from engaging with the format or even feel insulted and personally compromised by the fear associated with the sublime privation of ‘sense’ or recognised coherence. While the interviewed participant referring to potential failure framed this as personal failure in relation to the experience (AUD-F-03072014), the negative reviewers on TripAdvisor instead placed the responsibility for failure with the production, deflecting felt failure as a function of alienation in relation to the performance. As the work of the company is usually promoted and discussed in terms that emphasise the challenges inherent to the experience, the c. 15% of audiences that left strongly negatively reviews were unlikely to not have been aware of the format, and may have found it difficult to frame the challenges in positive terms. In contrast, action words used by the live interviewees (who were uniformly positive) in relation to the possibilities offered by the space, suggest exploratory approaches, including wandering and moving; gazing and seeing; feeling and experiencing. Deciding and choosing (another subcategory of action words) may correspond to such spatial expansion, based on the assumption that potentiality stimulates a desire to explore (AUD-F-03072014, AUD-M-11072014, AUD-M-01082014). Physical exploration and embodied decision-making may also, in audiences who found the experience positive, have served to regulate the fear of dissolution associated with the sublime.

The performance space of *The Drowned Man* in particular was low-lit, in parts very dark, and audiences sometimes had to navigate by feel rather than sight. The resulting uncertainty generated a heightened sense of potential and openness to the possibility of hidden meaning and intentionality:

Erm...so yeah, there was a couple of really weird moments that I wasn’t sure whether they were manufactured, or whether they had been intended or not. So there was a bit where I was running around, kind of following a couple of the actors, and they were running past, and.... fell over something, and I tripped on a piece of wood or something, and I had to put my hand out, and I put my hand out against the wall, and when I took my hand off the wall, it was...I had red paint all over my hands [laugh], and it was like I had bloody hands, basically, and I couldn’t figure out whether it was intended, whether I was supposed to trip over this thing, or whether it was an accident. Because it was...was such a...I didn’t know why the paint was still wet on the wall, you know, I just thought I’d just tripped over by accident, but when the paint was wet, it made me rethink “maybe that was on purpose”, that I was supposed to trip over it. Because it was obviously completely black, and there was just something in my way (AUD-F-03072014).

The ambiguity regarding agency, both in accounts of one-on-ones and navigation around the set, echo the ambiguity of boundaries associated with embodied cognition (Hayles, 2002:303) in relation to its environment. The uncertainty about the origin of actions that is created by distributed agency, even actions taking place in a physical space, appears to generate a tendency to read more into the set and the performance than was initially intended (COM-F-29072014), lending the experienced story-space virtual (as opposed to actual) properties. The effects of this ambiguity affected even regular stagehands, to the extent that their imagination “[started] to run away” in particular spaces, as discussed in section 7.3 (COM-M-27092014). The combined responses of interviewees and reviewers on TripAdvisor indicate that uncertainty and ambiguity undermine the dogmatic image of thought and the transcendent subject position, which, while strongly alienating a minority of participants (~15%), in others stimulates enrichment of the experience through imagined possibilities drawing on virtual worlds, and encourages exploratory approaches to the interface presented by the set and performance.

8.3 Masking and unmasking: shifting boundaries

Masking, a regular feature of Punchdrunk’s productions, serves a particular purpose in regard of the live set and performance dynamics, as well as audience behaviour and experience. The masks that audience members are required to wear within the performance space, apart from during one-to-one episodes, are identical and light-grey. As the masks are worn for three hours, participants become used to wearing them, and when actor/performer unmask the participating audience member in enclosed spaces during one-to-one performances, the experience can be shocking, as described by one interviewee, due to a sudden sense of vulnerability (COM-M-27092014). The masks worn by audiences are an adaptation of the Venetian *Bauta* and cover the entire face, although the lower part extends forward like a beak to leave the nose and mouth free. The original *Bauta* is a masculine mask with a square contour, but the Punchdrunk mask has been given more ambiguous form. The result does not define gender or species: the rounded extensions of both the lower part of the mask and the eye sockets are suggestive of a bird or the stereotypical ‘Grey alien’ of popular culture, and the audience, wearing identical masks, becomes a part of the scenography:

And you take the masks, you know, they are—they're part of the form and that as an audience member you become... there's a division between audiences foremost, but also there's a sea of white masks in a room, and they become part of the architecture, and they become a part of the performance in way. Also they do—I think they do something to you, and they are like a filter and you can only see out in a certain way. And they make you more aware of what you want to do, and you can't see other people around you as much (COM-M-21072014).

Individual audience members, experiencing the event primarily as first-person participants roaming the performance space, are made aware of their incorporation into an anonymised and

de-individuated crowd only when finding larger numbers of audience members assembled. When that occurs, audience groups of sometimes hundreds of identically masked participants form tableaux vivants (AUD-F-04072014). While contributing to a partial destabilisation of identity, the masks are described as both protection and an aid to immersion:

I like masks. I know some people freak out about masks. I don't know if anyone had that problem, but... Yeah, it's a nice barrier; it sort of makes things a lot less confrontational, and adds to the dreamlike quality of it, it sort of makes you feel distant enough to own the experience, rather than to have to interact. Yeah, maybe that's why it felt so, because we didn't... we weren't interacting with one another. It pulled us out of the experience, but we were definitely in it, and the actors weren't interacting with us in terms of responding to queues they were getting from us, they were just in their characters. So yeah, I think that is perhaps why it was so dreamlike in quality (AUD-F-04072014).

'Dreamlike' was a common descriptor of the experience (fig. 8.1), featuring in all audience interviews but one (AUD-M-28062014, AUD-F-03072014, AUD-F-04072014, AUD-M-10072014, AUD-M-01082014) and in several interviews with company members (COM-M-15092014, COM-F-29072014, COM-M-27092014). This dreamlike state was discussed by one audience member (AUD-F-03072014) as a function of the combination of masking and challenged agency through interactions with the Black Masks, indicating the importance of both social identity and personal agency to the experience of being in the 'real world' and that their contestation can induce a sense of being in a dream world. The diffusion of bounded individuality through masking extends to the masking or obscuration of the external boundaries of the space through the labyrinthine floor plan and the low-lit conditions; lights are kept at a level that is barely sufficient to allow for orientation. In combination with the shifting experience of agency discussed in 7.3, masking of both personal and spatial limits blurs boundaries between human and non-human agents and foregrounds the unsettling risk of "becoming-other" (Braidotti, 2013: 3). This risk is further emphasised through the possibility of incorporation in the storyworld by invitation to participate in one-to-one experiences, where masks are removed.

During one-to-one experiences the performer invites the participant within an enclosed space that is usually small, and proceed to unmask them. One-to-ones recorded by participants describe performer-led collapse of personal distance with touching that is formulated to conform to social norms, yet experienced and recounted with heightened intensity by participants due to the combination of enclosure, proximity, surprise, and unmasking:

Yeah, and I was like "no no no no no, I want it back, I want it back, I want it back; I feel safe with my mask on" and then she sort of got this sort of holy water, and sort of sprinkled it in my face. I remember it like it was yesterday. She got my face in her hands and there's, when she was close enough to kiss me, she went "you have to meet me at the castle, please meet me at the castle, we'll be safe there" I was going "I don't know what the f**k you're talking about, what castle", but I just nodded slowly as if to go "OK", but I wasn't like smiling or joking; I was deadly serious going "OK" in my

head going “yeah, I’ll meet you at the castle we’ll be safe!” I had no idea. And then she sort of put my mask on, and sent me out the door, and off she went. It was incredible. I was like “woooooow, that was intense!” (COM-M-27092014).

As described in 7.3, one-to-one events are experienced as overpowering by audience members, yet both audience members and performers discuss them as desirable and sought after:

I didn’t have any specific ones, which I was a bit sad about, because I knew that [name] had them, and I’d heard about, you know, whole scenes where they take your mask off, and they do all this stuff with you, but I didn’t get anything like that, which I was quite... I was quite disappointed about (AUD-F-03072014).

Participating in a one-to-one brings a startling sense of exposure. The mask constrains wide-angle vision and covers most of the face, and even though it protrudes away from the lower part of your face, the circulation of air around nose and mouth is reduced. Upon removal, the skin on your face is exposed, and you become acutely aware of having lost a shield offering anonymity and suspension of your habitual performed identity. The mask obscures your face from others and allows you to participate as unseen, even though your physical person is visible to others, and others are visible to you. When the mask is removed, your acquired belonging within the performance as an anonymous actor collapses: the dynamic is reversed, and the story-space of the one-to-one engulfs your personal space within a larger story-space comprising set and performers that you have been allowed to explore, guided by impulse and shielded by the mask. Concurrently, your awareness of the potential consequences of any actions taken is abruptly heightened as your face is exposed and you face the performer in close proximity. Although you are still anonymous in the sense of not being known to the performer, the baring of your face alters your perception of what is permissible in the situation. Being masked appears to lower impulse control, although the awareness of this by participants may only extend to how it might affect others:

Like, how, I don’t think if they didn’t have masks on, I don’t think they would have followed her that obviously. They had masks on, so they would just like “oh, f**k it, and I am just going to follow this impulse” (AUD-M-11072014).

The interviewee in this case was part of the crowd following the performer, but did not refer to his participation in this pursuit as dependent on the mask that he was wearing: instead, he refers to finding her “enchanted” (AUD-M-11072014), and found himself engrossed in the experience to the extent that he did not immediately realise that he was part of a large crowd:

I just thought “I’m going to follow her” and then I realised that [laugh] everyone did exactly the same as me, like, she was getting followed by about 150 people: some were like running or falling over each other, which was really interesting to me (AUD-M-11072014).

The implication of these observations is that the participant may be more aware of the way masks affect others than the way that they themselves are affected. The duration of the performance (three hours) facilitates habituation, which may contribute to this effect. The size

of the performance space also plays a part in the possibility of unawareness of the effects of anonymity on your motives for actions. As you explore the space, you do not always see other participants and are thus allowed to forget about your own, masked presence, while simultaneously relying on the sense of invisibility offered by anonymity. With the sudden unmasking during one-to-one experiences, your sense of invisibility is suspended, and you are brought to acute awareness of the proximity to the other person.

8.4 Embodied interaction

Starting from a phenomenological definition of embodiment, based on the irreducibility of lived experience and the collapse of the Cartesian dualism between mind-body dichotomy (Williams, 2001: 57), this thesis discusses the immanent subject-event relationship as supportive of embodied participation. Investigating Punchdrunk's theatre as an immanent interactive system opens the possibility for a critique of the making and maintenance of interactive systems, including digital interactive systems and their making cultures:

We have only recently noticed that systems are inexorably coupled to the environments they distinguish themselves from to arise as systems. It is as if the environments of systems had long occupied blind spots from which they have now been shifted into view (Clarke, 2008: 13).

Central to this query is the comparison between immanent and transcendent structures of thought and their reification, through emergence or design, in systems. Characteristic of transcendent structures of thought is their inscrutable centre, evasive of interrogation. The dominant centre of digital systems hails from the same lineage as the Cartesian subject, or so-called Man (Kittler, 1999: 16); omnipresent as 'rational thought' in approaches to problem solving and encoding embedded in computer systems and software. Remotely harvested statistical data drives the development of both digital systems and that which they are designed to manage through distributed networks (Galloway, 2004: 81-87), with clarity, distinctness and recognition reflecting the dogmatic image of thought inherent to statistical modelling from a transcendent perspective. The physical reliance of software systems on distributed network technology may on the surface invite comparisons with the concept of distributed cognition, but closer observation of making methods and system aesthetics reveals the hallmark of transcendent structures of thought:

[Ideology] misconstrues the nature of organizations of power, which are in no way located within a State apparatus but rather are everywhere, effecting formalizations of content and expression, the segments of which they intertwine (Deleuze and Guattari, 2004: 76).

The hold of transcendent thought, even in circumstances where it is contested, is echoed by some participants as they judge their experiences incomplete and imperfect in comparison with the 'full experience' they associate with the completeness of a central narrative (AUD-F-

03072014, AUD-M-01082014), although it would not have been possible to follow all story loops. The pervasiveness of transcendent thought is relevant also to the analysis of making cultures.

Embodied meaning-making, supported by immanent subject-event relationships, shapes the system narrative of Punchdrunk's storyworlds (COM-M-21072014), with distributed cognition and agency pervading the interactive system, taken to include the making cultures on both 'sides' of the interface. Functional and aesthetic design choices that support these concepts include anonymity, ambiguity, and intensity of detail. These reflect key concepts in the posthuman discourse, as discussed in the previous chapter, and anchor participation within immanent subject-event relationships:

The emphasis on immanence allows us to respect the bond of mutual dependence between bodies and technological others, while avoiding the contempt of the flesh and the trans-humanist fantasy of escape from the finite materiality of the enfleshed self (Braidotti, 2013: 91).

Anonymity within interactive systems supports the possibility of becoming-other, allowing the posthuman to be a subject that understands itself from a position of embodied cognition in emergent relations to their environment (Hayles, 2002: 303). In her discussion of immanence in theatre, Cull, via Deleuze, terms this a "postidentitarian philosophy of difference" (Cull, 2012: 17). For a comparison between theatre and digital interactive system, Braidotti's analysis of intrinsically exploitative data mining within digital systems presents three key features of 'Life-mining': visibility, predictability and exportability (Braidotti, 2013: 62). Audience behaviour modelling based on data mining is, in a perspective informed by de Certeau, a mapping practice of place: ordering and surveillance, performed from a removed, transcendent position. The resulting relationship between the watcher and the watched will tend towards an unequal power relationship founded on, and maintained by, the obscurity of the centre, or prime vantage point, and the visibility of the participants in the system, irrespective of the intent with which the system is created. Galloway, building on Foucault's concept of centralised control through the Panopticon model, extends Foucault's argument to include decentralised and distributed networks where the centre, while hidden and lacking physical representation, is disseminated throughout the structure (Galloway, 2004: 31-33). Galloway's argument supports the call for an investigation of the conditions of interaction to identify traces of transcendence.

Punchdrunk's theatre, as a model for interaction design, relies on information contained within the performance situation. Predictability models are formed to aid iteration of the environment, but these are based on unmediated observations of audience behaviour (COM-M-15092014), with no specific or demographic information about individual participants carried into, or out of, the situation. Within interactive situations involving masked audience participants, only their nonverbal signals can be read. Mutually meaningful interaction is

generated and contained in the precise detail of embodied interaction between performers, set and audiences, based on close observation of in-system behaviour but with no records of the identity or behaviours of individual participants. The specific identity of participants is thus irrelevant, but not their actions: observations of the quality and nature of these contribute vitally to iterations of both individual productions and the methodologies employed more broadly within the making culture of the company. While audience behaviour occasionally needs to be regulated, the company avoids issuing prescriptive directives (COM-M-21072014) and rely instead on in-show moderation of behaviour on a moment-by-moment basis, negotiating with participant agency while preserving anonymity (COM-M-27092014). The influence of actors and designers on audience behaviours, mediated by minute attention to detail on the interface level (COM-M-15092014, COM-F-29072014), is bound to and embedded in the specific situation that efforts are devoted to. As discussed in the previous chapter, the prediction and observation of behaviours are part of the design process, but the movement of audiences through space is viewed as a material force, unrelated to the identities of individual participants. The performance environment thus presents an enclosed world, and records of in-system audience behaviour only exist immanently as iterations of set and performance detail based on live observations. Anonymity allows the individual participant a fluid identity while within the interactive system, which in turn facilitates a sense of distributed agency through metamorphic potential.

Designing environments for anonymous agents and facilitation of emergent tactics, rather than the narrowing and funnelling of agency into specific affordances, forces the focus of the designer toward responsiveness in the moment. In digital terms, this suggests that actions and interactions, in order to be meaningful and/or expressive on a moment-by-moment basis, must be made readable. Bogost discusses the term *process intensity*, formulated by Crawford and referring to the degree of emphasis on process (rather than data) in a program, and suggests that higher process intensity has “a greater potential for meaningful expression” (Bogost, 2007: 27). Articulation of agency must, in a digital environment, be scripted. Process intensity, while potentially increasing the potential for meaningful expression, is resource-heavy in comparison with data handling and thus, in an interaction design paradigm dominated by a totalising understanding of efficiency, often avoided wherever it is not deemed instrumental to primary objectives. This is relevant to the extensive experience potential and depth of illusion layered into Punchdrunk’s productions, which are fundamentally inefficient if one regards the objectives of efficiency as relating to economic productivity, rather than quality of experience:

[...] you kind of embody everything that you do, so [...] you have to do that for every kind of item that you do, to make it exist properly. But as a model for doing things in a kind of efficient way, then it’s terrible <laugh> (COM-F-29072014).

Informal discussions with members of the company suggest that the commitment to intensely

processed and deeply layered making is an aesthetic choice rather than an ideological one, although the shared instinct to protect the integrity of the work of the company from ‘the outside world’ indicates that this aesthetic is also a form of embodied ethics. The shared aesthetic/ethics of process intensity over efficiency contribute to a meta-narrative that contests the “inhuman(e)” political economy of “bio-genetic” capitalism (Braidotti, 2013: 65), and incorporates not just the large number of people contributing to the production (in excess of 500 over the build and run of *The Drowned Man*) (COM-M-29072014), but also their audiences. The commitment to process intensity and participation, independent of financial incentives, positions both makers and audiences in Punchdrunk’s theatre within the orbit of self-exploitation (Bishop, 2012: 277), which is key to dominant monetisation models within interaction design. However, structural differences made manifest in the details of interaction reveal affinities with immanence (in the case of Punchdrunk) and transcendence (in the case of commercial interaction design based on the data economy monetisation model) that allow us to differentiate between the two.

Process intensity at the level employed within the company yields high detail in sets and performance to support micro-interactions, and creates interfaces that deprioritise linear conversion, instead encouraging sensory and psychological immersion in the moment. The coherent aesthetic of deep detail extends the experiential space and supports the suspension of disbelief (AUD-F-03072014, AUD-M-11072014, AUD-M-01082014), which allows diffusion of the boundaries between participant and the performance environment. Process intensity is not tied to the expressions it takes within Punchdrunk’s work; it can be applied to other aesthetics as its relevance is connected to the intensity of process itself, not the surface aesthetic of that intensity. In Punchdrunk’s work, process intensity produces deeply encoded interfaces and rich emergent capacity. These are combined with anonymity and ambiguity; all of which can be considered for application to the development of digital systems. The ambiguity that characterises Punchdrunk’s theatre-as-interactive-systems, and which is born out of process intensity and layered meaning-making, combines with a high-resolution, fine-grained environment to invite differential change:

This machinic vitality is not so much about determinism, inbuilt purpose or finality, but rather about becoming and transformation. This introduces a process that Deleuze and Guattari call ‘becoming-machine’, inspired by the Surrealists’ ‘bachelor machines’, meaning a playful and pleasure-prone relationship to technology that is not based on functionalism. For Deleuze this is linked to the project of releasing human embodiment from its indexation on socialised productivity to become ‘bodies without organs’, that is to say without organised efficiency (Braidotti, 2013: 91-92).

In this study, the material depth of the experience induced in audience members a sense of gratitude and delight in recognition of how much effort had gone into the creation of the production. Such descriptors were used in relation to the appreciation of complexity and depth

of expertise, and indicated the perceived potentiality of the experience inclusive of both degree of participation and wealth of affordances (AUD-M-28062014, AUD-F-03072014, AUD-F-04072014, AUD-M-10072014, AUD-M-11072014, AUD-M-01082014). Participants in this study consistently found the ambiguous aesthetic and the disorientation resulting from the challenges presented by the format stimulating and enjoyable, but the trust required to suspend disbelief was expressed as conditional to the sense of being supported by the depth of detail:

It felt like...it was a high... I suppose, yeah, because of the detail of the sets. It made me feel like I had more trust in them to give me a good experience, so, you know, I was really impressed by.... the different sets, the thick sands, the desert set was really cool, and the attention to detail in the rooms, and you could go and pick things up, and the notes, and things like that. So there's just lots of things that spark your attention (AUD-F-03072014).

The appreciation of complexity and investment engendered in the live audience members who took part in this study a combination of trust, curiosity and appreciation that allowed for openness to change and chance in the face of disorientation. This modality, as a dynamic property that cannot be subdivided can, unlike height or mass, be described as an intensity (Deleuze and Guattari, 2004: 24) or pure difference: a mode of being that is oriented toward dynamic change, rather than homeostasis (Bonta and Protevi, 2004: 101). The indivisible nature of intensities such as the dynamic state described by audience members in this study makes their linear quantification problematic, which challenges current conventions in conversion-driven interactive systems. While immersion and delight are common aims in interaction and user experience design, and attempts are made to quantify and produce such states in a scalable manner, audience responses in this study suggests that scalable design methodologies are counter-productive to immersion. The production processes employed by Punchdrunk and the appreciation by audience members of the outcomes of these production processes are both non-scalable and can, as they cannot be divided without changing in character, be regarded as intensities. The rapturous experiences recounted by audience members in connection with their ability to enter an immersive state is linked to their recognition of the non-scalable commitment of the company to design and making, evident in the combination of detail and scope:

I know it's for entertainment, but it needed to exist. And it felt like this culmination of like so many different talents, and they must've been influenced by so many other different talents over the course of their careers, who were, you know again, going back. So it was like, it felt like, my tiny little pinpoint experience of it, it felt like it was such, I don't know, I just felt at the same time so miniscule, my little eyes looking at this thing, but so infinite at the same time. And then kind of, quite thankful? But also, it was probably just kind of like, joyful immersion, as well – like forced immersion. [...]if people can make you fall off the cliff face of consciousness, then you drop into this pool of like, eternal oneness. [...] I'm not a new-age hippie person, I wouldn't even know what that would be. But like, I believe in the language of these things, you kind of drop into this pool of infinite oneness, and that's where we came from before we existed, and that's where we're going back to. And I feel like, when you fall off into this like, excitement, it's warmer and less scary. And I feel like when the world stops, like

generally when you fall in love or when you experience real art, it feels just like time stops – there's no outside. There's no yesterday, there's no tomorrow, and you're just kind of floating through space. And it's like “aaah, it's ok” [laugh] (AUD-M-11072014).

Several other interviewees also remarked on the connection between immersion and the detail and scope of the production, and expressed a sense of awe in recognition of the process-intense production methods (AUD-F-03072014, AUD-F-04072014, AUD-M-01082014). This suggests that the process intensity of the company's work, as an expression of distributed, embodied cognition-in-making throughout large teams that engage closely with the detail of interaction and set design, communicates across the interface layer to engender in audiences the impulse to take an immanent subject position in relation to the work. In doing so, participants suspend their critical distance and enter a state of immanence that mirrors that of the makers in relation to the interface, resulting in embodied investigation and exploration on both sides. The experience of ‘oneness’ articulated in the citation above (AUD-M-11072014) in response to the complexity of the interface expresses how immanence might be experienced by participants as an embodied, sublime state that resists subdivision. The sublime experience itself, as indicated by the quote above, can be regarded as intensity, in that it is associated with gravity and falling: the experience does not lend itself to subdivision into smaller parts or quantification by degrees.

In Punchdrunk's work, resolution is reified as detail complexity, but process intensity and the resulting resolution may be expressed according to different aesthetic principles, including minimalist expressions. Resolution, as a measure of the outcome of a more or less intense process, is indicative of the depth of investment in the process, including the number of iterations that have been made towards resolving the problem or challenge presented by the task of expressing a set of ideas or a narrative in the desired format. The interview material indicates that audience participants intuitively assess resolution as a function of process intensity and respond instinctively with trust and suspension of disbelief, and that sustained and consistent evidence of process intensity during prolonged interaction with the interface supports sustained engagement and immersion.

While these observations are made based on the experiences of live audiences, the accounts of experiences of participants in Punchdrunk's digital R&D project *Silverpoint* (Facebook.com, 2015) similarly suggest that digitally delivered blended reality experiences which are perceived as deeply layered and rich in narrative detail can engender a considerable degree of engagement. *Silverpoint* is an app and blended reality game developed in collaboration with the development company SomethinElse and was released in 2015. The app invited participation in a simple strategy game that unlocks narrative stages or layers, and eventually took players to specific locations in London, including a salon and a bar, where live interactive experiences allowed participants to collect additional points. In due course, they also

received information about a finale that was scheduled and performed during a period in late spring 2015. Beyond the first real-world interaction, game interactions via smartphone included voice and text messages, as well as email messages, setting quests to perform in London that engaged participants in dissolution of the boundaries between the mediated and live parts of the storyworld. The effectiveness of this strategy is reflected in the imaginary signs or ‘omens’ discussed in the Facebook *Silverpoint* ‘Spoiler’ group (Facebook, 2015): when reaching a certain degree of boundary dissolution, participants begin to see serendipities and connections with the game world that are not scripted into the design. The *Silverpoint* blended reality methodologies were based on a previous collaborative digital R&D project that Punchdrunk developed with Rose Bruford College in 2012. For this project, a simple smartphone game was built that encouraged point collection through tapping dots. No information was issued about the game being a Punchdrunk production, and there was no suggestion that the game would develop beyond the interface presented by the app. Once ten points were gathered, the player/participant received a message inviting them to sign up to another level of the game. If agreeing to this, they would gain access to a map of the college, via the app. As the participants advanced through the game and gathered more points, characters were introduced for whom the students could carry out tasks to collect more points beyond the tapping of dots. These characters would interact with participants via messages sent to the phone, inviting them to perform tasks (COM-M-21072014). In this fashion, participants for the higher levels of the game were self-selected through – and rewarded for – persistence and effort.

In tandem with developments in the game, live characters mirroring those in the game were set up (but not announced as actors) within the college, e.g. a secretary working in an office for whom students performed a test about the college, and a gardener who remained inactive in the game until the participant had proceeded to the required stage or level of the narrative. With progression through the game levels, more characters and more interactions were revealed, and the boundary between storyworld and real world was increasingly diffused. You could continue earning points from the game on your phone, as well as through interaction with the live characters of the storyworld. All points gathered were recorded on the mobile phones of the participants, to which scripted messages from the storyworld characters were also delivered. The live parts of the storyworld eventually revealed five locked rooms that players needed a certain amount of points to access. When access was gained, participants could collect specific items, and further levels eventually led them to an outdoors finale at night, when they were asked to go into the woods on the college grounds for the last parts of the mystery to be revealed (COM-M-21072014). The most persuasive aspects of the Rose Bruford R&D project was the incursion into ‘real life’ of the storyworld, and the resulting dissolution of boundaries between the real world and the storyworld. The unsettling effect of storyworld incursion was reflected in the drop-off in numbers of participants as the game became more exciting; a

development that seems counterintuitive if not taking into account the threat that is inherent to the sublime experience. The initial cohort of participants in the simple dots game was 100 students at the college, but as the game progressed through more and more immersive levels and the boundary between the physical and the digital storyworld became increasingly diffuse, numbers dropped until the finale in the woods at night, in which only six participated (COM-M-21072014).

Punchdrunk's smartphone-driven blended reality games yielded more success than the MIT R&D project discussed in the introductory chapter, which sought to 'scale up' and extend the reach of *Sleep No More* but failed to engender the type of immersion that participants report from their experiences of the physical productions. Scalability can be understood in different ways, according to the distinction between repetition and generality described by Deleuze (Deleuze, 2014). The Punchdrunk system that is described in chapter six, and explored in more detail in chapter seven, is scalable according to the principle of repetition, but not according to generality. A replicable formula does not preclude difference; repetition instead produces difference (Deleuze, 2014: 375). However, generality, which concerns the conception of an overarching order, can be traced in the approach taken to scalability in the MIT R&D project, where the researchers wanted to extend the reach of the situation through enlarging or 'blowing up' the experience within the interactive environment to reach beyond the situation in which the experience was had. In contrast, repetition in the Deleuzian sense resists the general and occurs in-situ, as an expression of the detailed particular: "In every respect, repetition is a transgression. It puts law into question, it denounces its nominal or general character in favour of a more profound and more artistic reality" (Deleuze, 2014: 3). The association between repetition and transgression suggests de Certeau's delinquent story-space (Certeau, 1988: 129-130), which disrupts the order of place. Here we may find the key to the relative success of the R&D projects developed in collaboration with Rose Bruford College and SomethinElse (*Silverpoint*), which relied on a replicable formula rather than generality, thus allowing the particularity of participation to yield the detail that supports an immersive – and immanent – experience. An interactive experience that is designed according to a replicable formula, and scalable in that it can be experienced by an unlimited number of participants, is thus fundamentally different from one that is optimised by scaling according to generality. Replication is not necessarily associated with a loss of quality in participant experience; this occurs when there is insufficient particularity. This distinction between repetition and generality is highlighted by the fact that each participant's experience of replicable formula, even though it flows around a common core, is unique (Deleuze, 2014: 2). Provided that the interface offers sufficient detail and affordances, participants bring their own specificity of experience to the interaction. For this to occur, they must be modelled as dynamic: an experience that is designed for participants that are modelled as stereotypes, via generality, contests agency.

8.5 Delinquent system aesthetics

In contrast to those offered by the transcendent order, immanent conditions of possibility are emergent, and not so much uncontrollable as fine-grained and open-ended, supporting the articulation of differential participation. Anonymity and ambiguity as aesthetic principles can contribute to the development of digital systems designed according to immanent structures of thought, combined with the prioritisation of process intensity over efficiency throughout the design process. Deleuze, as a theorist relevant to art in the wider sense and the encounter between subject and event in a more specific sense, rejects the binary distinction of ‘reality’ and ‘image’ or representation. Instead, he positions the encounter as a form of thinking in action (Cull, 2012: 4-5), and as the counterpoint to representation. The collapsed binaries of reality and representation (contained within the dogmatic image of thought) resonates with de Certeau’s description of the world as a story-space; neither real nor unreal, but composed of stories that order and stories that unsettle and extend. The Deleuzian encounter introduces a judgement where de Certeau holds back from making one, by assigning more ‘realness’ to differential thought than to dogmatic thought. Were the same applied to de Certeauan thought, the delinquent story that “cuts across the map” (Certeau, 1988: 129) and unsettles the order of place would be the spatial thought-form that extends possibility. The delinquent story, through metaphor, plays a double game that makes boundaries into “transportable limits and transportations of limits” (Certeau, 1984: 129): generating ambiguity. As shown in this study of physical system design, interactive systems can, as story vehicles, embody immanence and spatial practices that can be, and in some instances have been, transposed to digital, or rather blended human-digital interactive systems.

Longitudinal tracking by agents external to the local interaction, which is the mainstay of contemporary system monitoring (Braidotti, 2013: 62), creates, together with the visibility critiqued by Phelan, the conditions in which participants can be farmed for behavioural data in support of predictive modelling. Punchdrunk’s interactive systems, offering an alternative model for monitoring and directing participant behaviours, are limited in scope and therefore limited as objects of study for generalised application. However, in their own genre they serve as a robust object for the study of interactive systems, evidenced by the through-flow of people (<600/night), the scale of the productions (>100 individual rooms), the duration of the performances (three hours), the level of access granted to participants, the length of the production runs (one to four years and more), and the repeatability of the concept. The denseness of the materialities involved in the productions ensures that the Punchdrunk model is not scalable according to the generality principle, as the necessary investment of time and resources is substantial. It does not, however, preclude scalability according to repetition. Process intensity, put forth in this chapter as a key component of Punchdrunk’s work as

immanent interactive systems, can be equally applied to material platforms and aesthetics beyond game development and interactive performance. For example, algorithmic filters could be generated to recognise behaviours in the moment instead of tracking behaviour over time, an area in which there has been some initial promising discoveries (Cheng, Danescu-Niculescu-Mizil and Leskovec, 2015). Yahoo Labs are investing in natural language recognition research to develop algorithmic filters for online abuse (Nobata et al., 2016), but real-time natural language processing remains a challenge. Recognition of potentially destructive in-system behaviour may be the first step, but the more crucial element in bringing culture to bear on the digital is how the design and scripting of subsequent interactions is developed. Just as Punchdrunk observes crowd behaviours in order to design particular interactions in detail, algorithms could be written to trigger specific interactions in response not to the system history of individuals, but to specific actions. Here, we return to narrative as a means to involve participants in a story-journey. The question of how we can meet, interact with, and harness participation that present as delinquent within the system narrative must be opened to participation from interaction designers across the full disciplinary spectrum. The enhanced ability by software systems to process ambiguity will be key to extending emergent response capacity, but the development of embedded narratives that can serve to harness, rather than simply filter out, delinquency and behaviours currently not actively considered for interaction design will require interdisciplinary consideration and collaboration.

The articulation of the shadow side of interaction through situated engagement and response could address and meet inappropriate or destructive in-system behaviours (if modelled on the Black Mask function), and even harness them to enhance a sense of the sublime in the participant. The sublime, as discussed by Zima, is an aesthetic experience that lies outside – and even destroys – ordered beauty (Zima, 2010: 127), including rationality constructs. The effective harnessing of delinquency to deliver a sublime experience is exemplified by the account of one participant in response to a situation where they were crossing into an area currently used by performers, and found themselves ‘controlled’ by a Black Mask to prevent disturbance or harm (AUD-F-03072014): the perceived blending of agencies created a vertiginous and dreamlike sensation that enhanced their experience. Supporting this account, the description of the precise techniques employed by the Black Masks to engage and regulate the behaviours of audience members (COM-M-27092014) demonstrates that what occurs is not direct control, but the co-opting of audience members through narrative means. The interaction is designed, remains within and simultaneously extends the experience of the story space, resulting in a ‘dreamlike’ experience from the perceived dissolution of the boundary between self and environment. The participant’s sense of dreamlike vertigo is not a function of a void, but of spatial engagement and the articulation of potentiality. Emergent in nature, the articulation of (as connection and movement-with) unintended, differential, and even deviant

actions within interactive systems thus serves the twin purpose of cooperative regulation and extension of the experiential space. To fully benefit from the potential and additional processing brought to the interaction by participants, a postdigital system aesthetic that truly brings culture to bear on the digital must question efficiency based on externalities as a proxy for purity, and harness delinquency as an expression of difference.

Having explored embodied audience participation in blended reality interaction design as participatory processing, the next chapter will summarise the findings of this research and offer a conclusion of the thesis.

Chapter 9: Conclusion

This thesis, which presents the results of primary research of Punchdrunk productions regarded as interactive systems, proposes a postdigital sublime for interaction design that incorporates proxies for gravity and articulates the ‘shadow side’ of interaction. In this view, participants are included in the essential materialities of interaction design and modelled as dynamic; i.e. in terms of their agency, with their identity being considered fundamentally unstable or morphic. These propositions, and the opportunities presented by their implementation, are discussed in more detail below, and include the suggestion that the distinction between digital and physical materialities is problematic. The discussion includes a critique of efficiency as currently used in the interaction design field, particularly in regard of its reliance on externalities, and suggests that postdigital definitions of efficiency can harness differential narratives brought to the interaction through articulation. For this, system users – or participants, as they are conceptualised here – should not be modelled or mapped over time as if they were stable entities or territories to survey and exploit as closely as possible: the focus should instead be on the agency of participants, and the qualities of interaction. This proposal for a postdigital sublime thus challenges efficiency with a delinquent system aesthetic that extends experiential space through the articulation of and negotiation of the actions and agency of participants.

9.1 Differential conditions of possibility

Punchdrunk’s productions are not mass produced, but they are produced for mass audiences, with 400-600 audience members per show over production runs lasting one to five years and counting. The Punchdrunk formula is replicable, and constructed around a plan that divides the timeframe within which the interactive drama is presented into three story loops of one hour each, subdivided into twelve five-minute-long sections. The set is divided into twelve performance zones, each with its own soundtrack to frame and time the story loops that take place within. The narrative is thus played out in three dimensions plus time, allowing audiences the possibility of returning to the same time point in a story loop in a specific location, albeit with the uncontrollable factor of the audience added, which may change the circumstances for viewing and participation. Constructed around this formula, the large productions by the company, e.g. *The Drowned Man* and *Sleep No More*, are created with close attention to set detail and the specific qualities of micro-interactions, as explored in chapters seven and eight. Audiences respond with the desire to explore, develop tactics, and figuring out solutions (as discussed in chapter eight), with many returning multiple, even dozens of times. Regarded as interaction design, this response to the work of the company is notable for its persistence over time, supporting its viability as a case study that is relevant to the broader field of interaction design.

According to Deleuze, the imposition of generality on particulars, i.e. the subjects of actualised generality, can only determine their resemblance, and the particular subjects can only illustrate (or perform) according to the generality imposed upon them at the cost of their own difference or change. Herein lies the difference between over-optimised interaction design based on scalability, and interaction design based on replicable formulae. Particular subjects (as opposed to the ‘pure’ or conceptual subject) are “condemned to change” as a function of being particulars rather than concepts. This change is difference, and it is inherent to repetition, as defined by Deleuze. As the ‘pure subject’ that is excused from change is an abstract concept, affordances designed for pure subjects (i.e. participants modelled as generalities) cannot empower the actual or particular subject. The accurate in-system performance of the actual subject instead enacts their own powerlessness to repeat (Deleuze, 2014: 2-3). The modelling of participants as stereotypes for the purpose of interaction design reduces them to ‘pure subjects’, while a postidentitarian view on participants as changeable and dynamic agents systemically alters this position and the associated conditions of possibility.

In Punchdrunk’s physical interaction design, as analysed in chapters six to eight, the immanence of the situation pervades on the general, with the particularity of participants, makers and performers alike exerting a constant pressure on the interface. The participation of audience members, makers and performers are thus particular expressions, i.e. repetitions, around the generality of the Punchdrunk formula, summarised above. This analysis is supported by de Certeau’s theory of space and place. The emergent qualities of the interaction fall under spatial practices, and place is expressed through the scheduling and ordering of the movements of participants and performers around the twelve-by-twelve formula and within the shape of the physical sets. Emergence is central to the aesthetic of Punchdrunk’s interactive systems, which raises the question of resilience. Their methods for creating and managing conditions of possibility that both allow for, and depend on, emergence in the sense of adaptive, expansive, exploratory and/or iterative behaviours are of particular interest to postdigital interaction design, which must move beyond brittle categorisation. Resilience through accommodation of emergent behaviours underpins the readiness and commitment to perseverance in the face of challenge and productive collaboration that was expressed both within the company and live audiences during the course of this research. Participant experiences, both within the company and among audience participants, are commonly expressed in terms associated with the sublime (AUD-M-28062014, AUD-F-03072014, AUD-F-04072014 AUD-M-10072014, AUD-M-11072014, AUD-M-01082014, COM-M-27092014, COM-F-29072014, COM-M-21072014, COM-M-29072014). Such experiences are generated in response to disorientation and adaptation, experiential extension of self and dissolution of boundaried identity, immersion, and awe. References to awe occur in relation to the scope of the experiential space, which is a product of

the sheer size of the performance space, the depth or ‘thickness’ of detail, and the unknowable in direct interaction with Black Masks and performers.

Participants in Punchdrunk performances are regarded as unknowable in all respects pertaining to their identity. In contrast to the power imbalance created when the ‘black box’ of commercial system mechanics meets participants that are ‘made visible’ and modelled as personalised data objects, this allows all parties to the interaction to be emergent. Observational data gathered through interviews in this study (as discussed in chapter six) shows that actual audience participants are characterised more by their changeability than by their consistency. This view of participants pervades the maker culture within the company and the way they conceptualise audiences, which produces immanent subject-event relationships, rather than transcendent ones; the participant is not regarded from a remote vantage point that places them within conceptual frames drawn beyond the immediacy of the situation. This perspective on interaction design, whether applied to digital or physical materialities, focuses on the interaction (which is the only genuinely situational factor) as a dynamic exchange, and not the participant (who is always ex/changeable). Affording the participant anonymity, and articulating the interaction in detail creates a situation that takes place between two reciprocal unknowns (system and participant), and an interaction that may be understood within the parameters of the situation. Human participants cannot be summarised by their behaviour in the situation, or meaningfully represented by an extrapolated data representation of their identity that is formed according to stereotypes and/or previously recorded behaviours. Data on participant actions within a particular interactive system will reflect their actions within that system, and not necessarily be transferrable to another system, as shown in the analyses of the ‘Spoiler’ and Superfans social media discourses that are discussed in the introductory chapter of this thesis, and described, with data tables, in appendix 4. Like questions formed according to predetermined answers, data harvesting, when occurring by an observer in a transcendent subject position in relation to the observed, tends toward self-affirming queries and thus circular knowledge generation, bearing the imprint of the hierarchy of the observation situation. Affording the participating agent an ambiguous presence in terms of identity is more demanding of process, but it is also more open to the unfolding actuality of the situation. It supports the extension of experiential space, and facilitates more open-ended knowledge generation, specific to the interaction, rather than the participant.

A critique of fixed identity constructs, represented as datasets built on demographic characteristics or past behaviours around which interaction design is modelled, is key to the postdigital sublime. The methodologies developed by the company to promote and sustain immanence within their interactive systems can be applied to the design of digital interactive systems, and call for changes to the current interaction design paradigm. Articulating the agency of participants, through modelling and affordances, may allow for metamorphosis and make

possible a delinquent system aesthetic that facilitates difference and new form. The ambiguity of identity that allows for metamorphosis can also be extended to the interface, which, in the case of Punchdrunk's productions, is designed for disorientation rather than clarity. Situational process intensity, embedded within the interface, supports both ambiguity and delinquent morphism through invitation, feedback and regulation of emergent behaviours from participants. Process is laid into the interface through the layered semiotics of set detail, the actions of performers, and the interventions of the Black Masks. Essential to the infrastructure of ambiguity, process intensity supports metamorphic conditions of possibility in which anonymity and postidentitarian interaction facilitates emergence.

Data intensity, discussed in a dichotomous relation to process intensity by Bogost via Crawford's argument (Bogost, 2007: 27-28), is proposed as productive of place, i.e. the reductive ordering of categories and participants within an order issuing from a transcendent organising principle, external to the interactive system. Data intensity is indicative of a transcendent subject-event relationship, while process intensity is required to produce experiential space, emergent or immanent in-system participation, and has "a greater potential for meaningful expression" (Bogost, 2007: 27). The analyses undertaken in previous chapters show that emergent in-system behaviours that are based on the extension of experience potential require that we model or conceptualise audience participants as changeable in regard of identity and behaviour. Punchdrunk's audiences are conceptualised by company members as a fluid force, experienced in terms of pressures and flows (COM-M-15092014, COM-M-27092014, COM-M-21072014). As discussed by Couldry, Galloway and Bowker and Star, the ideological and discursively produced norms that underpin categorisation and the mediation of normative myths are performative and productive of their reification, and the embeddedness of normative constructs within categorisation makes their pervasion of interactive system infrastructure insidious. Without challenging how participants and participation are categorised and represented within interactive systems, designers have little choice but to participate in a totalising practice via the inherent transcendent in participant modelling that is a legacy in the software engineering field. An inherent flaw in this model for interaction design, as suggested earlier based on Deleuze's critique of dogmatic thought (Deleuze, 2014: 203), is circular knowledge generation: situational data, produced in response to the system narrative of the interface, is harvested and fed back into a self-referential system narrative.

For both design and participation to be spatial or extensive forms of knowledge generation, interactive systems need to support ambiguity as far as possible. The difficulty with which ambiguity, in comparison with clarity, is processed by digital interactive systems verifies Deleuze's arguments regarding the *de jure* structure of thought (Deleuze, 2014: 192-193), but should not be accepted as a given limitation to knowledge generation by way of interactive systems. Fuller and Goffey, in their discussion of natural and formal languages, point to the

totalising limitations of formal logic that seeks to suppress that which lies outside of what is determined to be productive reasoning. Instances where decision powers have been delegated to algorithms demonstrate that formal logic is neither neutral nor unbiased (Kaminska, 2016), with critics pointing out that algorithmic discrimination reflects the structural inequalities that feature more widely in society (Miller, 2015). Fuller and Goffey suggest that the optimisation efforts that are made in the name of the technological norm are in themselves generative of “aberrant movements”, and propose “a sophistic plug-in” to the idealism of formal logic (Fuller and Goffey, 2009: 156). Their reference to sophistry highlights the amorality of delinquency; language play that incorporates ambiguity includes metaphor and play, but also manipulation and falsehood. Examples of playful exploitation of the tension between the rigidity of formal logic and the interpretative possibilities offered by ambiguity include Twitter bots that generate plausible-sounding, but nonsensical tweets, e.g. @thinkpiecebot and @you_have_died (Reed, 2015), with absurdist, and sometimes poetic, results. Similarly, Google has created an AI poetry generator, drawing on 11,000 books, including romance novels (Burgess, 2016). AI could also be included, in functions similar to Punchdrunk’s Black Masks, within interactive systems, e.g. as local AI functions that act as narrative pivot points, rather than thinking of AI in representational terms (i.e. the Turing test). The Black Masks highlight and remind participants of consequences of their actions through direct, narratively aligned interaction, and it is more relevant, in this perspective, to conceive of AI as ‘always-on’ negotiators of actions taken at particular instances and junctions. Immanent implementation of AI could apply to the problem of moderation on mass-participation platforms, and introduce localised, immediate consequences of participant behaviours, i.e. proxies for gravity. Attempts to create AI to imitate human appearance and behaviour bring up ethical issues, and it is notoriously challenging to avoid nonsensical and/or ‘dead’ ends in open-ended communication. Writing AI for highly localised, always-on functions allows for enhanced depth in that function, highly specific to the situation. Such narrow focus on the detail of interaction, rather than imposing universal (and transcendent) images of thought as the model, would allow for enhanced processing in the moment, with ambiguity, as an instability of space/place, being produced in the interaction between human and machine participants. In line with de Certeau’s definition of metaphors and other figures of speech, ambiguity is thus emergent: an unfolding, situated play or articulation. In this view, the AI and the human agent within the interactive system, in a joint interpretative act, articulate/perform the metaphor, and embody ambiguity. This could be implemented in forms of digital interaction design that range from service design to experience design, across both verbal and haptic interaction, and would pose a particularly relevant challenge to the conditions of possibility on social media.

If the complexity and emergent capacity of human participants are treated as externalities, and not incorporated in interactive systems, the result is not just reductive

interaction, but also poor data. The inclusion of human participants within the ‘weird materialities’ proposed by Parikka (Parikka, 2012b: 99) as relevant to an analysis of digital media will need to incorporate consideration of how this ‘material’ is represented: in which form, and in what capacity. Parikka argues in his critique of Berlin media archaeologist Wolfgang Ernst (Parikka, 2011) that crisp disciplinary delineations for the study of digital media can offer depth to studies of particular areas of interest, but that they produce an insufficient basis for the analysis of the procedural rhetoric of the psychotechnics of cognitive capitalism (Parikka, 2012a: 73-74), which is dependent on the participation of human actors (Bogost, 2007: 1-64). The discussion of audiences in terms suggesting fluid dynamics within *Punchdrunk* addresses their dynamic movements through the designed space in ways relevant to designing, building and maintaining the interaction, but not their real-life, or out-of-system, identities. Deprioritisation of identity for the purpose of interaction design shifts the focus from the identity and personal characteristics of the participant to what they might do and how they might respond in the moment, reflecting Rancière’s argument about the stultifying influence of hierarchy, and setting the scene for interpretative participation (Rancière, 2009: 9-14). The focus is on experience potential, for which the unknowable is not problematic, but instead brings enhanced potential that can be accommodated and harnessed as far as possible, and regulated when necessary. This research proposes close attention to interactions and their qualities for a postdigital interaction design that includes participants as dynamic entities, with modelling focused on the digital representation of actions and interactions to support immanent subject-event relationships, rather than stereotypical representation within a hierarchy with a transcendent efficiency principle.

The dynamic properties of human participants as ‘story-vehicles’, according to accounts from interviews with live participants in this study, allows them to rapidly move between space and place, negotiating what they might be empowered to do and what they might refrain or be prevented from doing, and under what conditions (AUD-F-03072014, AUD-F-04072014, AUD-M-10072014, AUD-M-11072014, AUD-M-01082014). These emergent negotiations occurred in a gravitational, or consequential, space. Simulated digital environments, at least when presented on screens, are not noticeably gravitational unless gravity is simulated, but if one considers the ‘weird’ materialities of digital interactive systems, analysis shows that the mediating material (code, and the software platforms engineered through code) cannot be viewed as external to the materialities of the world we inhabit. ‘The digital’ cannot be usefully regarded as somehow other-than, or purer-than, the human, messy world: it is formed according to human concepts, and is, in the case of software engineering, a culture that historically has embraced a modernist structure of thought and feeling. The purity of form and intent inherent to modernism can be applied to the design of objects with relative success, but resilient design for

any mass participation of humans, whether in digital or physical platforms, must accommodate ‘impurity’ and delinquency.

2015 saw the beginnings of a shift towards regulation of the ‘wild frontier’ aspect of social media, with Twitter stepping up filtering based on the automatic recognition and tracking of antisocial behaviours, after the company’s CEO acknowledged their failure to uphold the social contract on a systemic level (Hern, 2015). Facebook came under increased pressure to review their content rules, and for the first time explicitly banned content that promotes sexual violence and exploitation, as well as support for groups that advocate violence and hatred (Goel, 2015). Facebook’s content remains moderated by human employees (Chen, 2014) with additional reporting by users, and the company has only recently committed publicly to developing automated filtering, after the influence of falsehoods presented as news for political ends gained public attention. Moderation features, like making posts that conform to trolling behaviour invisible to others, have been available for implementation on social media networks since before the millennium shift (Taco, 1999), but incentives to restrict traffic have been weak. The hitherto dominant monetisation models have contributed to a web economy founded on ad impressions and click-through rates. Online advertising has, however, begun focusing on contextual brand awareness to enhance brand sentiment, e.g. through sponsored long-form content (Auerbach, 2016). More media platforms are moving towards continuity, which can be seen in the increased popularity of longreads and coherent on-page contexts inclusive of content and advertising, and web publishers have begun to switch off the comment section in response to these developments (Finley, 2016). The designed role of participating audiences in the consumption and circulation of online content is thus diversifying, with less dependency on tightly instrumentalised short-cycle interaction (Lloyd, 2016) and more focus on longer narrative loops. These shifts suggest an emerging readiness for postdigital spaces that support narrative continuity, including such that is offered by social contracts. The current limitations to effective immanent responsive capacity, in tandem with transcendent watching via data harvesting that reaches into the intimately personal, creates a digital infrastructure that promotes a hybrid of ideological efficiency and a peculiar form of anarchy. For postdigital conditions of possibility in which culture is brought to bear on the digital, as proposed by Berry (Berry, 2014a: 157), this is no longer satisfactory.

9.2 Articulating the shadows

The awareness of consequences demonstrated by many of the interviewed participants (AUD-F-03072014, AUD-F-04072014, AUD-M-10072014, AUD-M-11072014) occurs, in the case of the live performances, in a gravitational environment: things can break, and people may get hurt. Virtual environments are notable for, among other things, the absence of gravity, which at least situationally lessens the impact of consequences, as gravity-dependent sensory feedback is

missing. This shifting perception or awareness of consequences has been discussed in the context of virtualised or mediated war, made interesting or even pleasurable through abstraction (Favret, 2009: 24). Reduced awareness of actual impact is a matter of concern on social media, where harassment with personal consequences for the target is often carried out under the guise of pranks or jokes. The flip side of perceiving oneself as unable or ‘innocent’ of causing real harm sometimes combines with a self-image of victimhood (Penny, 2016). This seeming paradox may be explained by the proposition that the awareness of personal power, or agency, is in part dependent on the awareness that you have the ability to cause harm or destruction, upon which the possibility of doing otherwise becomes apparent. It is hypothetically possible that one may feel disempowered even while exerting power over others in an environment where one’s actions do not seem ‘real’ as they are not weighted. A virtual environment may thus be made more broadly empowering to its participants by the introduction of proxies for gravity, i.e. consequences that are experienced as personal, and possibly also of a lasting or final nature.

In Punchdrunk’s work, the possibility of failure, loss and the ‘dark’ or unseeable is articulated; not just in the types of narrative the company chooses to develop, but in the way the sets are built and dressed, and in the way performances are developed. As previously discussed, it is possible to ‘fail’ as an audience member through inappropriate or insufficient effort invested in participation (AUD-F-03072014). Punchdrunk’s productions offer other possibilities of risk and failure to both performers and participants, and the Black Masks play a key role in managing the tension between potential and actuality of risk. In one-to-ones between an individual performer and audience member, the performer is potentially at risk of being the target of unpredictable behaviour from the audience participant (COM-M-15092014, COM-F-29072014). The participating audience member typically has an exaggerated experience of the power that the performer exerts in the situation, even though the interactions are carefully designed to not be physically intrusive and rely entirely on the cooperation of the participant (COM-M-15092014). The intimate setting of the one-to-one interactions evokes a sense of exposure to the agency of another person, which can trigger attempts to dominate, or exaggerated responses to being dominated by the situation. The Black Masks regulate behaviours through articulating potential consequence as well as the unseeable; being dressed and masked in black, and interacting with the audience wordlessly, they remain hidden within the set until intervention or guidance is needed. Their role is to meet and regulate destructive behaviours by audience members, including acts that may put participants (audience or performer) at risk, compromise the experience of others, or destruction or theft of parts of the set (COM-M-27092014). Thus, their role is specifically developed for interaction with and regulation of destructively unaligned behaviours (non-destructive unaligned behaviours are generally accommodated). They do so using methodologies that were developed to preserve,

and even extend, participants' immersion in the performance environment, with slow, deliberate movements and techniques that influence the movements and actions of audience members without the need for verbal instructions (COM-M-27092014).

While key to the metamorphic potential for participants, anonymity can act as a disinhibitive force, with unpredictable consequences. The articulation of the 'shadow side', with the embedded capacity to respond to unpredictable and destructive behaviours, therefore needs to accompany anonymity. The rules for engagement are not laid out in advance of Punchdrunk performances, other than a simple set of recommendations to optimise the experience (e.g. participate alone, and follow your interest when exploring). Regulation of inappropriate or destructive behaviour instead occurs immanently; within the situation, and in a fashion that is designed to re-align or even deepen the participant's engagement with the experience. Neither the identities of audience members nor their actions are recorded, meaning that interaction remains local to the situation in which it takes place. The anonymity principle thus interacts with process intensity, in that embedded processes that interpret and respond to interactive behaviours can successfully regulate, and often enhance, in-system behaviours arising from disinhibition that is facilitated by anonymity (AUD-F-03072014, COM-M-27092014).

An articulated shadow side to the interactive system has a further effect on the experience of participants: it serves to diffuse the perceived edges of the experiential space, as well as the boundaries of agency. The resulting ambiguity appears to support a "dreamlike" experience, in which participants are lucid and physically active while feeling as if they are being controlled by agencies belonging to the performance space, suggesting the sublime experience as a function of potential loss or disintegration of self (AUD-F-03072014).

9.3 The postdigital sublime

If it concerns the participant in interactive systems, the postdigital sublime is not the Kantian, transcendent sublime founded on the ultimate dominion of reason, but Lyotard's postmodern sublime as the secondary privation of a threat (Lyotard, 1991: 99). The postdigital sublime, as a function of transgression and extrasubjective experiences, or loss of self in association with reason, may broaden the scope for interaction design, and supports the concept of proxies for gravity in virtual environments. As a composition of the postmodern sublime and the posthuman condition, it invokes threats based on the failure of reason and order, with the associated sense of dissolution or diffusion of self. The pervasion of delinquency, associated by de Certeau with the 'old gods' that prey upon the contemporary order, generates the potential for transgression and emergent story space, and insinuates itself as related to the sublime experience. One example of digital transgression is so-called benign computer viruses, most of which were created between 1970 and 2000, some of which with no other purpose than introducing an element of surprise or pranks (Kaspersky Lab, 2014). Malicious computer

viruses have dominated since, often compromising both local systems and personal information about the user. Reduced to an externality, delinquency persists in the heated and often grotesquely irrational ‘bottom half of the internet’ where it has roamed almost unrestricted. More lately, mainstream media attention to the influence of toxic and counterfactual social media content has increased, as well as the range of online art and progressive activist practices that respond to, and sometimes appropriate, tactics used by internet trolls. An example of a delinquent system aesthetic at work can be found in the artist practice of Nora Reed, who employs tactics borrowed from social ‘troll bots’ in the creation of social bots that bait Twitter trolls into unwinnable arguments that consume their time @good_opinions (“a woman online”), and @opinions_good (“a man online”) (Dewey, 2016). Another narrative-based intervention, created by Berlin-based art activists The Peng Collective, is *Zero Trollerance*, which purports to be a six-step self-help program for misogynistic internet trolls, triggered by troll-detecting algorithms (Peng Collective, 2015). While a satire of self-help programs, it stresses the psychological consequences of fear, anger and hate in real terms. If brought within the system narrative, delinquency can be harnessed through articulation and regulated with proxies of gravity, scripted to support and extend experiential space.

The postdigital sublime, reliant on the threat of dissolution (of self and reason), has a spatial component that can be extrapolated from the Romantic sublime, drawing on representations of nature as beyond comprehension; unknowably wild and immeasurably large. Building on Lyotard’s sublime, the postdigital sublime is thus associated with loss of reason, and dependent on a perspective on materiality that can perhaps be described as consequential: the threat, albeit twice removed, must be experienced as sufficiently real, or immanent, to produce the sublime response. Zima, defining beauty as a unifying concept that contributes to the “constitution of the subject” via good taste and good sense (Zima, 2010: 125), positions the sublime as an aesthetic experience that lies outside ordered beauty and which “destroys unity” (Zima, 2010: 127). The unity referred to by Zima in relation to sense can only be conceived from a transcendent perspective, sufficiently remote to reduce the grain and resolution of experience that complicates the totalising image and purity of ‘good sense’. The impurity that can be found in complication is thus a part of the sublime, via the extension of experiential space through differential detail. Other themes for the sublime response in digital materialities include the vertigo of unknown boundaries, applied to the ambiguous self and its extensions, and to possibilities and complications stemming from the ambiguously boundaried self, including the intrusion and imposition of other agencies. These narratives are explored in the discussion of posthuman metamorphosis by Clarke (Clarke, 2008), as well as in Hayles’ discourse on cyborgian romanticism and the posthuman (Hayles, 1999; 2002), with the distinction between a transcendent and an immanent perspective being articulated in the Cartesian critique of the latter. A focus on embodiment allows for acknowledgment of, rather

than disassociation from, the ‘mindbody’ as the site of experience in an immanent perspective on the posthuman, and opens up avenues for conceptualising the sublime as founded on distributed, rather than disassociated, agency.

The anti-sublime may be found in the conflation of prediction and prescription in the “irreducible region of irreflection and spontaneity” (Derrida, 2001: 2-3), or the “dogmatic image of thought” that construes its questions to exclude the possibility of impurity among correct answers (Deleuze, 2014: 203). Software engineering as a discipline seeks its rationale in objective metrics, proposing a democracy of footfall, and a freedom from top-down ideology, supported by a plenitude of data. However, as this is sought from the perspective of the good sense of ‘so-called Man’, that which lies outside ordered beauty may be disregarded when formulating the protocol of questioning – including the interrogation of the image of so-called Man. Phelan’s work on the relationship between representation and power in performance, theatre, art, photography and film is relevant to the visibility that results from stereotyping within interactive systems: “There is real power in remaining unmarked; and there are serious limitations to visual representation as a political goal” (Phelan, 1996: 6). Phelan’s thought clarifies the power of interrogative totalitarianism that is articulated by Derrida, when applied to the visible and the invisible within interactive systems. That which remains ‘unmarked’ is the locus of observation, and the totality against which the ordering and categorisation of observations are made, be that the hegemonic norm represented in human or in abstract form, e.g. reason-as-efficiency.

For a postdigital interaction design paradigm, this thesis proposes an effectiveness, rather than an efficiency, that draws on the sublime. Such an effectiveness could yield abstract outcomes, in the form of profound or enhanced experience, and evolve the paradigm for ‘good content’ that is currently in place, informed by metrics and standards associated with the visions of software engineers, including Google’s famous motto ‘Don’t be evil’. The associated benefits of abstract and experiential returns on cultural expressions are historically established as desirable and fundamental to the formation and maintenance of discursive superstructures. As of 2016, the rationality narrative, whether in the hands of computer scientists, economists or politicians, is being openly challenged, even hijacked, by populist voices, who have effectively exploited the facility of digital media for hyperstition; the performative function of imagined futures, collapsed chronologically into the present (Lütticken, 2017). The more fervent aspects of accelerationism, which may not be a purist, but certainly anti-gravitational expression of modernism in its fetishisation of disruption, appear to have receded in tandem with the public emergence of the alt-left/alt-right populist strains of revolutionary ambition. In their place, new accelerationisms have emerged, with more focus on “eccentrication” and navigation than speed (Mackay and Avanesian, 2014: 42-43). This suggests the influence of *metis* (Fuller and Goffey, 2009: 150), which, with gravity and delinquency as aesthetic stratagems in an immanent

perspective, may allow us to pick out a path that elides the capture of puritanism and populist exceptionalism, while drawing on the sublime for resonance with lived experience, by way of the mediated threat of its loss.

For this to occur, conditions of possibility in the postdigital experiential space cannot remain in the sole control of software engineers and advertisers, with poorly paid (or unpaid) content producers and ‘users’ as a mass category of data livestock populating the platform economy. The arguments made by digital platform providers tend to revolve around service users or audiences not being prepared to pay or invest more, but this may be countered with the observable willingness of audiences to make considerable, and repeated, efforts (including financial effort) to participate in high-resolution, high-process intensity interaction design like Punchdrunk productions. Liveness likely plays a part, and amplifies the efforts audiences are willing to make or invest in response. However, an “online liveness” (Auslander, 2012: 5-6) is also possible, in which participation may be contemporaneously shared with others and experienced as unfolding in the present, even if the interaction occurs between a human participant and a chatbot or other AI presence (Auslander, 2012: 7): an experiential space, rather than a place. As demonstrated in this research, a postdigital efficiency that is measured in the capacity to engender in audience participants the willingness to invest both effort and money can be based on experience potential. For this, generalities and the associated tendency to over-optimise or scale at the expense of quality of experience must be replaced by a focus on repetition, for which optimisation can be achieved through replicable formulae. Repetition, even within digital interactive systems based on replicable formulae, allows for emergent particularity through the experience potential brought to the situation by participants. The inherent emergence within repetition (Deleuze, 2014: 1-2) disrupts the unity of ordered beauty (Zima, 2010: 127), and produces difference. Postdigital efficiency, if measured in the experience potential produced by difference, can thus find its rationale in the creative fertility made possible by deviation from generalities. In Punchdrunk’s interaction design, ‘inefficiency’ is celebrated in tactics that seem perverse: disorientation, unclear objectives and deliberate obfuscation of identity. This approach shares key features with adventure or quest games, but runs counter to the representational interaction design paradigm that dominates mainstream game design in other respects, e.g. progress is not a meaningful concept for participants in Punchdrunk productions, and outcomes are undefined and uncertain. Other differences, when compared with mainstream computer games, include the equal distribution and gender swapping of male and female characters, as in the doubling of the character set of *The Drowned Man* that brings in William's mirror character Wendy, and Mary's mirror character Marshall. This plot device served not only to yield further complexity to the narrative, but also extended the experiential space through unsettling the idea of fixed gender identity and its relationship to established roles. Through engineered disorientation formulated by spatial and narratively

layered metaphor, and an interactive aesthetic formed around Lyotard's postmodern sublime, another efficiency emerges that may be defined by its differential and sublime potential. A postdigital efficiency modelled on Punchdrunk's interaction design engenders resilience and perseverance in the production of meaning on both sides of the exchange, and runs counter to the inherent nihilism in 'pure' efficiency.

9.4 Proposed future developments

A prominent feature of digital code is the facilitation of discontinuity; a material development that took place historically in tandem with the wider processes of later capitalism. Discontinuity underpins on-demand production units and managerial structures (Boltanski and Chiapello, 2005: 194), and carries within it the potential for spatially extensive disruption or, in de Certeau's words, "cutting across the map" (Certeau, 1988: 129-130). Yet digital code also carries within it the means of territorialisation. While digitisation is a process of making-discrete; a process aligned with the objectives of modularisation and modernism, the conventions of code are discursive, and generate continuity within a medium that was born to embody the discrete and disruptive. Continuity is less open to entry or departure, and the legacy of code, discursively formed within its discipline, is both opaque and evasive of scrutiny to the uninitiated. Skill is a form of continuity that builds on what went before in relation to a particular medium or material, and conventions formed in relation to particular materials and technologies persist through time, sometimes beyond the relevance of their origin. The adjustment of the current dominance of totalising perspectives within software engineering may occur not through 'everyone learning to code', but through the accumulation of external and internal pressures to further integrate software engineering within wider societal discourses. A postdigital perspective on coding or software engineering suggests that the discipline be included among the many others that collaboratively articulate the human condition, rather than being regarded as a technological new frontier promising semi-magical powers in the mythos of the popular. In place of the call for everyone to learn to code, the postdigital condition may instead call for code to learn to be everyone, in the sense that software engineering needs to find its place as an established part of culture, immanent to the social.

The narrative of the digital as a modernist structure of feeling is similar to the machine mythos of futurism in the early 20th century, and, like futurism's association with fascism, is aligned with the quest for efficiency as a disruptive force that is disassociated from the social. The postdigital approach to demystification of the digital thus needs to consider narrative in relation to the social, just as it does the technological in relation to political economy. According to Berry, code is a story form, acting as a mediator and providing a way to "negotiate a material world" (Berry, 2011: 127), a perspective that supports de Certeau's theory of story and its capacity for mediating between place and space. In a discussion about phenomenology

and computation, Berry describes two images of the world as being either manifest or scientific and presenting, respectively, a continuous world of flows or one of discrete elements (Berry, 2011: 129); the former being representative of the world as space, and the latter of the world as place. He suggests a third image: the computational (Berry, 2011: 132), which combines features of both the continuous and the discrete images, and acts as a dynamic translator or bridge that, in de Certeau's terms, organises "the play of changing relationships" (Certeau, 1988: 118) between them.

The digital can facilitate both space and place; the distinction lies not in the materiality but in the structure of thought according to which the material is shaped. Rather than mythologising the digital by virtue of its abstracted physicality, we could review our perspective on materials used in all forms of human production and instead question the naturalisation of layered process as entirely material. Parikka critiques the object-oriented focus of the Berlin media archaeologist Ernst as one that focuses on the time-critical circumstances of the digital without much consideration of the human as participant (Parikka, 2011: 59-60). In this context, he suggests that we instead use the bridging epistemology of presence as a way to understand both a material analysis of the digital and one that includes social perspectives. Countering the disciplinary tendency to create externalities that obscure from consideration the socially located participant in digital interactive systems, Parikka proposes that "[media archaeology] still needs to articulate more tightly the wider networks in which the techno-mathematics of media take place" (Parikka, 2011: 67). Citing Wardrip-Fruin, Parikka puts forth the concept of software as expressive beyond code essentialist authorship, with media archaeology also considering the "operationality that spans between uses and machines" (Parikka, 2011: 68-69). Mainly basing his analysis on game design, Wardrip-Fruin makes the case for process intensity as expressive processing, acknowledging and emphasising the authorial in the writing of processes (Wardrip-Fruin, 2009: 18). Bogost, citing Wardrip-Fruin, defines expressive process intensity as the "comparative intensity of behavioural processing" (Bogost, 2012), and proposes games such as the ones designed by Chinese Room (e.g. *Dear Esther*, *Everybody's Gone to the Rapture*) as proportionally more process intense than games based on instantial assets, as they incorporate narration and player-led exploration. The carefully crafted, replicable aspects of Punchdrunk productions, including set design and choreography, can also be regarded as instances or instantial assets. Process intensity takes the form of emergent interaction, iteration and maintenance by design team and performers, as well as the responsive extension of the set that is performed by the Black Masks. In this light, the participation of audiences is also a process, and should be regarded as integral to the interaction.

The same principle could be applied to other types of interactive systems than computer games and performance interaction design, including those that fall under service design, on which we have come to depend more crucially. The incursion of stories upon stories that are a

part of our negotiations in and through daily life is an under-the-radar mediation of friction between different layers of meaning in our physical environment, and the fellow agents with which we share it. Negotiation and adjustment is a part of everyday life and calls on our ability to navigate ambiguity and boundaries. The narrative conventions held by individuals may be broadly shared, or shared within subcultures. Smooth negotiation of such boundaries is sometimes facilitated by outer signs that instruct or indicate specific narratives, but outer signs may not be interpreted the same way by individuals with disparate belief systems, interpretative models and conventions. That which we call society can be regarded as a compromised, complex, layered and, through its discursive formation and maintenance, emergent interactive system. Postdigital systems should reflect and accommodate this complexity and the emergence of compromises, running counter to the modernist digital structure of feeling that seeks purity under the flag of efficiency. Consequently, postdigital system efficiency would be judged more accurately by its ability to mediate friction and lack of purity, i.e. difference, than by its ability to mediate instrumental purity by way of reductive categorisation. This suggests the inclusion of enhanced responsiveness, digital articulations of social contract/s, and the capacity within systems to support differential behaviours.

A digital economy formed around data intensity will entrain its users to the conformities of data harvesting at the expense of emergent behaviours by enforcing the enactment of generality. According to Deleuze's argument regarding the pure subject as opposed to the particular subject, this is an inherently disempowering participant position. Phelan, in her critique of representational visibility, emphasises how mediated representation performatively produces the rationale for its own existence (Phelan, 1996: 4), much in the way the dogmatic image of thought described by Deleuze produces a world view akin to itself even through problem-solving (Deleuze, 2014: 217). The performative reproduction of representation is, according to Bowker and Star (Bowker and Star, 2000: 25), particularly insidious when incorporated as categorisation within systems. The hiddenness of categorisation is amplified within digital interactive systems as well as in machine learning, where behavioural modelling is performed under the rubric of stereotyping for predictive algorithms. The representational processes of coding and territorialisation as described by Deleuze and Guattari (2004: 45-49) are subject to governmentality, or totalising 'state thought' (Deleuze and Guattari, 2004: 27). Representation, as a phenomenon that reinforces norms even through deviation from the norms, is discussed extensively by Phelan in relation to her argument that empowerment is to be found within the unmarked (Phelan, 1996). The transcendent subject position is unmarked and removed from the intimacy of consequences that can be found in immanence. 'Marking' in relation to the transcendent subject position is, according to Phelan, a primary act of distinction and separation which also contains and disempowers. Hence, visibility as a function of deviation or difference from the unmarked norm is not a source of power (Phelan, 1993: 10). If

we wish to design for empowering interaction, the focus should be on articulating differential interaction itself, and not on defining the participant in the interaction. In real life, as in the arts, embodied participation complicates the elision of systems of representation, whereas the digital offers the possibility of participation as unmarked. However, transcendent tracking and reductive user modelling doubly compromises the participant by way of the hiddenness of the watcher and the stereotypical representation of system users. Anonymity in a story space is thus a formative condition for emergent behaviours, as it allows for metamorphic play and the extension of possibilities.

Identity play, in the form of mimicry and the imaginary, is one of the key forms of play described by Caillois (Caillois, 1961: 19) and Sutton-Smith (Sutton-Smith, 2001: 127). Both theorists suggest that the temporary suspension of ordinary identity facilitates make-believe. Anonymity meets the fertile delinquent in the carnivalesque (Bakhtin, 1984), where the broader practice of masking in both formal and informal performance is a key feature that draws on the narrative archetype of fantastic bodily metamorphosis (Clarke, 2008: 46). A key condition for participation in Punchdrunk live performances is the wearing of a mask that obscures the entire face during the three hours of the performance (AUD-F-03072014, AUD-F-04072014, AUD-M-11072014). In the Punchdrunk/MIT R&D project (discussed in the introductory chapter), the conditions for immanence stipulated by Braidotti (Braidotti, 2013: 62) were violated by exporting information about the participant from the performance environment. This mediation appears to have prevented immersion: the external (online) watchers/participants, who could access the data from the in-system participants, failed to ‘connect’ with them (Dixon, Rogers and Eggleston, 2012). Instead, they found more connection with the operators that provided the online experience, with whom they interacted on a plane of immanence.

Anonymity, as a principle for interaction design proposed by this research, suggest that participants should, as far as possible, be conceptualised as agents; i.e. in terms of their dynamic potential rather than as static representations based on demographic categorisation. Future directions suggested by the outcomes of this research include interaction design based on the modelling of agency and interactive behaviours immanent to the system as spatial interpretative processes. This approach to modelling participation reflects the predominant emergent responses and in-system behaviours by participants discussed in chapter eight, which are dominated by exploratory ‘figuring out’ action words (see 8.2, fig. 8.2) and positively framed descriptors of disorientation (see 8.2, fig. 8.1). These are associated with experiences described in terms of challenge and loss of sensory or narrative orientation, with successful participation being described as integration with the interactive system (AUD-M-28062014, AUD-F-03072014, AUD-F-04072014, AUD-M-11072014) and with references to the extension of experiential space through dissolution of personal boundaries (AUD-M-28062014, AUD-F-03072014, AUD-M-11072014). The enjoyment of disorientation and perceived diffusion of self

that is described by interviewees suggests that the embodiment of a posthuman subjectivity within a narrative system can generate awe and the desire to explore. This links the sublime with motivation and curiosity: impulses that are both spatial and transgressive, as in the original meaning of ‘stepping across’. Meaning-making by participants, who are responsible for the composition of their own narrative, occurs through physical movement and interpretation of metaphors and other ambiguous representative figures, resulting in a story space that extends with the embodied interpretative processes of the participants. Metaphor, as the product of memory and process, becomes a practice that is performed by participating agents; both the makers involved in the production of the interface and participating audiences. Posthuman ambiguity allows participants agency that is not prescribed or limited by their representational form, and makes possible the play and extension of identity discussed by Clarke as posthuman metamorphosis, drawing on the delinquency of grotesque transfiguration. As boundary play, the grotesque story feeds on the delinquency associated by de Certeau with the old gods, and counters the nihilism of ideological purity by means of metaphor and narrative fertility based on ambiguity and transgression. Conceptualising participating agents in terms of their potential for change and agency thus redefines the articulation of their identity as a spatial practice in itself. In interaction design, this puts pressure on process, as the diffraction of meaning made possible by ambiguity calls for multivariant narrative affordances.

As discussed in the introductory chapter and revisited in chapter six, the behaviour of participants in interactive system is subject to change according to conditions of possibility, and the definition and modelling of participants as actors within interactive systems can be regarded as performative. Defining behaviours in differential terms pushes the requirements for development of postdigital interactive systems in the direction of process (productive of space), rather than data (productive of place). Software engineering, being bound by the relative hiddenness of digital materialities and the continuity of narratives within its discipline, has arguably come to prioritise place over space; data over process. Interdisciplinary collaboration between the postdigital arts and humanities could serve to revitalise both fields (Braidotti, 2013: 144-150) through querying the conditions of possibility created by digital forms of data and processing, via questions that have preoccupied the arts and literature throughout the 20th century. Key areas for research and development, as discussed in this thesis, include questions of representation and subject-event relationships. In collaborative research practice, such questions could frame analyses of the procedural rhetoric of in-system participation, and the effect of system narratives that are embedded in the infrastructure of interaction design. The potential reach of code via distributed network technology means that it can be approached as a craft or art without compromising reach. This facility positions interaction design as a form of applied art that can be informed by the arts of the social; performance art, literature and architecture, all of which have historically influenced each other. Participatory performance art

shares with architecture expressions of embodiment through codification of the body and the shape of spaces in which human activity can occur. Both performance art and architecture occupy and comment on the social space and, like the digital, are simultaneously spatial and social discourses. The postdigital opens up a space for digital materialities within these discourses, where it may be informed by their histories. The postdigital integration of the social human, which, in their diversity, fluid identity, and environmental dependencies may be more accurately described as posthuman, needs to also be implemented within the culture of software engineering in order to influence conditions of possibility: a mutual pervasion to bring software and the social into a plane of immanence.

In Punchdrunk's interactive systems, performers within the systems, both actors/dancers and Black Masks, contribute process intensity to the production of meaning and metaphor. In purely digital interactive systems, digital agencies could be considered for such roles. The academic report from Punchdrunk's collaboration with MIT in 2012 concludes that "digital performance needs digital performers" (Dixon, Rogers and Eggleston, 2012: 7), and in digital systems, the responsive and narrative capacity that is discussed here could be augmented by artificial intelligence. While artificial intelligence is often discussed and assessed in relation to how faithfully it represents and mimics human behaviours, responsive potential based on immanent, rather than transcendent, interactive systems need not follow hegemonic representation. Responsive in-system agents could perform in a situated capacity, and be scripted accordingly. The postdigital pervasion of social, professional, administrative and everyday spheres by computational systems puts the voluntariness of participation into question. This should prompt the integration of embedded social contracts in interfaces through in-system or immanent responsive agencies that support and regulate interaction, based on situational qualities.

Chapter seven discussed micro-interactions, with close attention to the texture of each moment, as the focus of designer efforts. This is considered in the context of regulation of participant behaviour, i.e. interventions from Black Masks, which can be as subtle as making eye contact, and are usually sufficient to elicit self-regulation (COM-M-27092014). Eye contact, unlike surveillance, belongs to moment-by-moment actions and interactions within an immanent plane. Hypothetically, a more closely responsive environment, by way of the human faculty for anthropomorphisation, could engender the experience of being seen or recognised in the capacity of agent. Cross discusses the question of social contracts for virtual worlds, suggesting that anonymity, while allowing perpetrators of harassment cover to their activities, also provides transformational or metamorphic possibilities, as well as essential protection for real-life identities, to non-harassing participants in virtual worlds: a "capability" (Cross, 2014: 10-11). Furthermore, Cross proposes that the terms of engagement in virtual worlds cannot remain unregulated, and suggests that the development of social contracts is essential to cyber

society (Cross, 2014: 13-16). Immanent articulation of social contracts to regulate participation in interactive systems would likely be more effective than the prevailing tendency to bury the rules of engagement in terms and conditions clauses that are rarely visited or read in full, and usually formulated on an opt-out basis. Recent research has focused on the development of filters that detect specific qualities of interaction on a moment-by-moment basis, as an emerging alternative to longitudinal tracking. An example of research in this field is the ‘troll-detecting algorithm’ developed collaboratively by researchers at Cornell University and Stanford University (Cheng, Danescu-Niculescu-Mizil and Leskovec, 2015), which is based on longitudinal observations of troll behaviour and concludes that persistent trolling can, with 80% certainty, be predicted after five posts.

Detection of antisocial behaviour is, however, only the first step in a paradigm for interaction design that articulates not just agency, but also the shadow side of licence. As this research has shown, experience potential can be extended through the harnessing of the differential brought to interaction by participants. Audience accounts of narrative regulation by the Black Masks in Punchdrunk productions suggest that it enhances the experience through engendering the sublime. In a postdigital perspective that brings culture to bear on the digital, fine-grained articulation of the interaction between participants and system on a moment-by-moment basis can extend the potential of experiential space. Here, the relationship between anonymity, ambiguity and process intensity is thrust into focus, and this thesis has demonstrated how metaphor and narrative are key to emergent conditions of possibility, whether working in physical or digital materialities. Questions regarding the modelling and conceptualisation of agency that emerge in the postdigital condition can be informed by posthuman and postidentitarian principles to address the entanglement of participating subject and other technological moments. Integrating the meaning-making processes of participating subjects as essential moving (or articulated) parts of the interaction design limits the scope of control either by purity or clarity, with ambiguity supporting the extension of the participating subject. Ambiguity, programmed into the software assemblage as system play, supports narrative mediation, and by drawing on *metis*, or story-skill, engages the participant in reciprocal narrative processing. This creates new opportunities for working in a computational mode with subjective experiences and aesthetic works more generally, beyond current, dominant models of personalisation that are based on profiling. A process-intense approach to interaction design that engages both the makers and the participants in mutual mediated meaning-making must redefine efficiency in light of the sublime. Within a sublime postdigital system aesthetic, experiential space may be extended through articulation of the fine detail of interaction, this way harnessing the un-modern, including the superstitions and metamorphic dreaming that haunt the distributed imagination of network infrastructure.

Appendix 1: Analysis of interview data (including tables and figures)

My analyses of interview accounts of the experience of making and participating in Punchdrunk productions (chapters six to eight) were performed using NVivo in two steps. The first layer of analysis was done based on the theories of de Certeau, and the second was informed by the theories of Deleuze and the post-Cartesian posthuman discourse. For the first step, de Certeau's theory of space and place was used to investigate the relationship between licence and scheduling within the company, and the embodied narrative practices that allowed spatial operations mediating between the two. This also included the responses of audiences to the experiences of licence and control, and the narrative regulation of their participation. A further category concerned descriptions of tactics, i.e. emergent responsive behaviours, in relation to the challenge presented by the situation. References to the experience and extension of space and licence were assigned to the category of 'space', and descriptions of order, mapping and scheduling, either as practices or experiences, were assigned to the category 'place'. Descriptions of how transitions were managed were coded to 'narrative regulation – spatial operations', and adaptive responses to changing circumstances were coded to 'changing tactics'.

Node	Type of reference
Space	Interview references describing practices that extend licence and/or experience potential, and the experience thereof.
Place	References to practices that schedule, order or map the performance space, time and in-system behaviours of participating audience members.
Narrative Regulation – Spatial Operations	References to practices that regulate or manage transitions between the extension of licence within the interactive environment and order or alignment with the design.
Changing Tactics	Descriptions of adaptive responses to changing circumstances.

Figure A1.1: Categories (nodes) for discourse analysis using de Certeau's theory of space and place.

The prevalence of each in interviews with audience vs. company members was calculated from queries of the data set performed using NVivo, and then compared in relation to the total to arrive at a proportional number. As can be seen in figure A1.2, the spatial tactics of audience members only converged weakly. Only the third level of analysis showed convergence.

Interview	Dominant node	Secondary node	Tertiary node
AUD-M-28062014	CT	NR-SO	NR-SO
AUD-F-03072014	CT	PI	NR-SO
AUD-F-04072014	Sp	CT	PI/NR-SO
AUD-M-10072014	PI	Sp	NR-SO
AUD-M-11072014	NR-SO	Sp	CT
AUD-M-01082014	PI/NR-SO	PI/NR-SO	Sp
Audience totals	-	-	NR-SO (4:6)

Figure A1.2: The prevalence of audience references coded to nodes Changing Tactics (CT). Space (Sp). Place (PI) and Narrative Regulation – Spatial Operations (NR-SO). Dominant and secondary nodes were spread across all categories, indicating that none of the spatial approaches dominated clearly in audience interviews. Only the tertiary node revealed a convergence of references mapping to NR-SO.

The first two levels of audience references to spatial tactics were scattered across all four categories, with the third level of analysis yielding a convergence of Narrative Regulation – Spatial Operations, suggesting awareness of the ongoing, moment-by-moment negotiation of social contract/s in response to the performance environment, actors and Black Masks (fig. A1.2). In contrast, the references to spatial tactics made by company members showed a strong and consistent convergence pattern, with Narrative Regulations – Spatial Operations again dominating, but now at the top level, and with a more defined convergence (fig. A1.3).

Interview	Dominant node	Secondary node	Tertiary node
COM-M-15092014	NR-SO	PI	Sp
COM-M-27092014	PI	NR-SO	CT
COM-F-29072014	NR-SO	Sp	PI
COM-M-21072014	NR-SO	Sp	PI
COM-M-29072014	NR-SO	Sp/PI	Sp/PI
COM-F-03122014	NR-SO	Sp	PI
Company totals	NR-SO (5:6)	Sp (4:6)	PI (4:6)

Figure A1.3: The prevalence of company member references coded to nodes Changing Tactics (CT). Space (Sp). Place (PI) and Narrative Regulation – Spatial Operations (NR-SO). Spatial approaches mapping to NR-SO has a clear predominance in the interviews where company members describe their work, with 5:6 company members referring most commonly to spatial operations that regulate the interactive narrative, and to practices that serve to manage transitions between extensive/emergent behaviours and experiences. The second most common type of reference, used by 4 out of 6 interviewees, indicated practices associated with facilitating extension of audience agency and emergent behaviours. The third most common reference (4:6) fell under the ordering/scheduling/mapping category. CT was the least predominant approach.

The second part of the analysis of the interview material concerned textural and experiential descriptions of experience and actions, ‘descriptors’ and ‘actions’, respectively. The most common 1,000 words at least three characters long were listed, Common figures of speech, e.g. ‘fine’ and ‘right’, were removed from the descriptor sample, as were descriptors specific to features of the performance, e.g. ‘black’ referring to Black Masks rather than participant responses to low lighting, or ‘bloody’ referring to paint or stage blood. The same process was applied to verbs and actions, with verbs used in generic additions to other verbs such as ‘do’, ‘be’, ‘take’, ‘make’, ‘keep’, ‘come’ and generic activities such as ‘stand’ or ‘sit’ removed. Descriptors and actions were then grouped according to their meaning in context. The predominance of each was then calculated as the percentage of the total number of descriptors included in the sample. This yielded sets of experience and action categories describing embodied meaning-making by company members and audience participants within the story world or interactive system. Finally, the two sets (experience descriptors and actions) were mapped against each other in order of prevalence.

The largest category of descriptors concerned sensory deprivation and disorientation, and included a relatively broad range of words, e.g. ‘crazy’, ‘mad’, ‘bizarre’, ‘curious’, ‘weird’, ‘strange’, ‘cryptic’, ‘tricky’, ‘confused’, ‘baffling’, ‘unknown’, ‘lost’, ‘deprived’, ‘random’, ‘accidental’, and ‘chaotic’. Alternative descriptors based on the same words were also included, e.g. ‘weirdness’. Interviews revealed a rich and varied range of words describing bewilderment and confusion, which, as an aside, suggests that this may be an important field of human experience, that we do not assign sufficient attention to, particularly for interaction design. This group comprised 11.8% of the total number of descriptors in the sample. Other descriptor groups with a strong presence in the interview data were ‘love’, ‘enjoy’ and similar, at 10.0%, ‘different’, ‘original’ etc. at 7.6%, ‘interesting’ at 6.4%, and ‘impressive’, ‘magnificent’ etc. at 6.4% (fig. A1.4). The largest group of action descriptors, comprising 18.3% of the sample, were those associated with ‘figuring out’ and grasping ideas or phenomena, e.g. ‘understand’, ‘know’, ‘realise’, ‘learn’, ‘figure’, ‘discover’, ‘notice’, ‘find’ and related forms (fig. A1.5). These came from interviews with people who all enjoyed the experience to a considerable degree, suggesting that active ‘figuring out’ in response to confounding circumstances, i.e. a form of embodied problem-solving, was framed in a very positive light. The second largest group of action descriptors was closely associated with the first, and included more speculative and prospecting types of cognition, e.g. ‘think’, ‘believe’, ‘suppose’ and ‘guess’. These comprised 13.5% of the total sample, and if the two largest groups of action descriptors (describing figuring out/grasping cognitive activities and more prospecting ones) were combined, they would comprise 31.8% of the sample. As this analysis was undertaken against the background of de Certeau’s theory, I chose to keep the open-ended and prospective cognitive action descriptors separate from the ‘figuring out’/grasping ones, as they can be

regarded to be associated with space and place, respectively. Further action descriptor categories, as detailed below (fig. A1.5) described cognitive and embodied processes that broadly retain the characteristics of spatial operations, with attention to their specific texture.

Descriptor/s of experience	Prevalence
Bizarre, curious, strange, cryptic, confusing, chaotic, lost, deprived, random etc.	11.8%
Love, enjoy, [it was] good, nice, appreciate	10.0%
Different, new, original	7.6%
Interesting	6.4%
Impressive, awesome, incredible, magnificent, unique, extraordinary, etc.	5.7%
Big, huge, massive, large	5.3%
Open, accessible, allowed, free	4.7%
Real, authentic	2.9%
Hard, difficult, uncomfortable	2.8%
Direct, straight, linear	2.6%
Powerful, intense, bold, strong, passion	2.4%
Interactive	2.3%
Immersive, full, experiential	2.2%
[In a] dream, dreaming, dreamlike	1.8%
Live, alive	1.7%

Figure A1.4: The prevalence of the 15 most common descriptor subsets listed above is described as the percentage of the total number of descriptors that were used to qualify the experiences of participants, extracted from a sample of the most frequently used 1,000 words (at least three letters long) in participant interviews that were undertaken in the course of this research.

Action words	Prevalence
Understand, know, realise, learn, figure [out], discover, notice, catch, find, hold	18.3%
Think, believe, suppose, guess	13.5%
Go, walk, move, leave, wander, head, follow, lead, run, charge	12.0%
See, look, gaze, focus, view, watch	8.8%
Talk, say, tell, speak, describe, explain, articulate, mean	7.2%
Feel, sense, experience	5.9%
Work, try, engage, challenge, fight	5.9%
Want, need, wish, hope, expect	5.6%
Act, dance, pretend, play, game [as activity]	3.6%
Create, recreate, build, form, devise, design, develop, craft	2.2%
Choreograph, arrange, train, control, manipulate	1.5%
Change, adapt, shift	1.0%
Decide, choose, pick	0.9%
Question, ask, doubt	0.8%
Contact, approach, meet	0.7%

Figure A1.5: The prevalence of the 15 most common action word subsets listed above is described as the percentage of the total number of words signifying the actions of participants, extracted from a sample of the most frequently used 1,000 words (at least three letters long) in participant interviews that were undertaken in the course of this research.

Appendix 2: Set photos from build and take-down



Figure A2.1: Ground floor and basement of the Old Sorting Office during build of *The Drowned Man*, with partition walls and perspective murals in the process of being created by the build teams (photographs by the author).



Figure A2.2: Examples of set detail; ice effect on props for the winter scene set, and origami pyramids folded from Temple Studio corporate documents for Mr. Stanford's office (photographs by the author).

The figure consists of three black and white photographs of a large wall spreadsheet. The spreadsheet is a grid with multiple columns and rows, containing handwritten notes and diagrams. It is mounted on a wall with black clips. The first photo shows the left side of the spreadsheet, the second shows the middle, and the third shows the right side.

Figure A2.3: Wall spreadsheet (c. 0.7m x 3m) with all performance zones and performance loops, coordinating the changes, movements and interactions of characters in the space over an hour (photographs by the author).

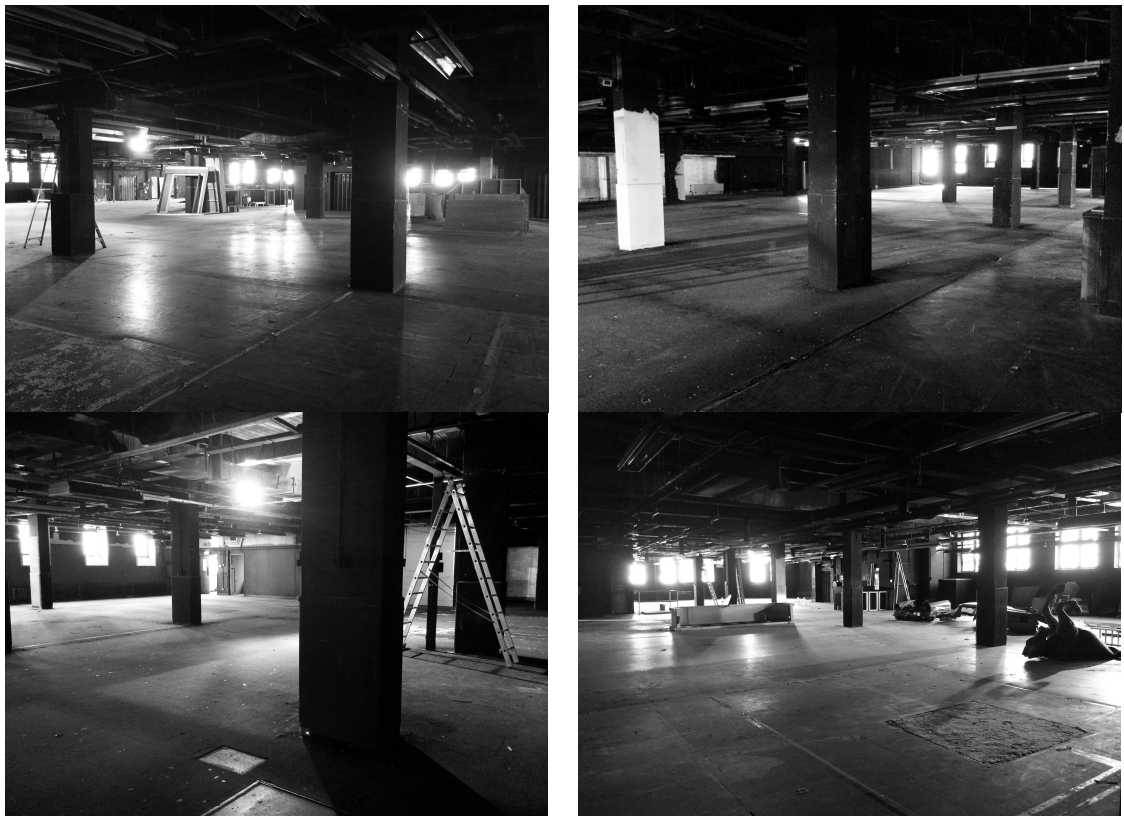


Figure A2.4: Photos of the nearly empty space during take-down, taken in four directions from the same spot to indicate the extension of the floor area without partition walls (photographs by the author).



Figure A2.5: Larger set details during take-down (photographs by the author).



Figure A2.6: Red Moon desert scene miniature model, and the original full-size Red Moon neon sign after the desert scene was dismantled and removed (photographs by the author).



Figure A2.7: Set details during take-down, including prop scripts for use on the set, medical reports from the doctor's surgery, character models, desert shrine model, Temple Studios monogrammed handtowels, eye charts, hand-written letters between the characters, Dolore's mask, and a model of the life-size horse from Studio 8, in preparation for auctioning and shipping to collectors (photographs by the author).



Figure A2.8: Close-up of the character model box, with name tags, and the life-size Wendy-Marshall/William-Mary model from the Masonic Hall in the basement (photographs by the author).



Figure A2.9: Take-down of lights and sound technology, and larger set details including parts of the wall panels from the Masonic Hall in the basement (photographs by the author).

Appendix 3: Fandom map artwork

The fan art shown in this appendix is referred to in general terms only in the thesis itself, and the photos reproduced here serve as illustrative examples only. For this reason, figure numbers are not included. Permission to reproduce the photos shown was obtained as detailed below.

The Drowned Man maps, designed by Marcus Moresby

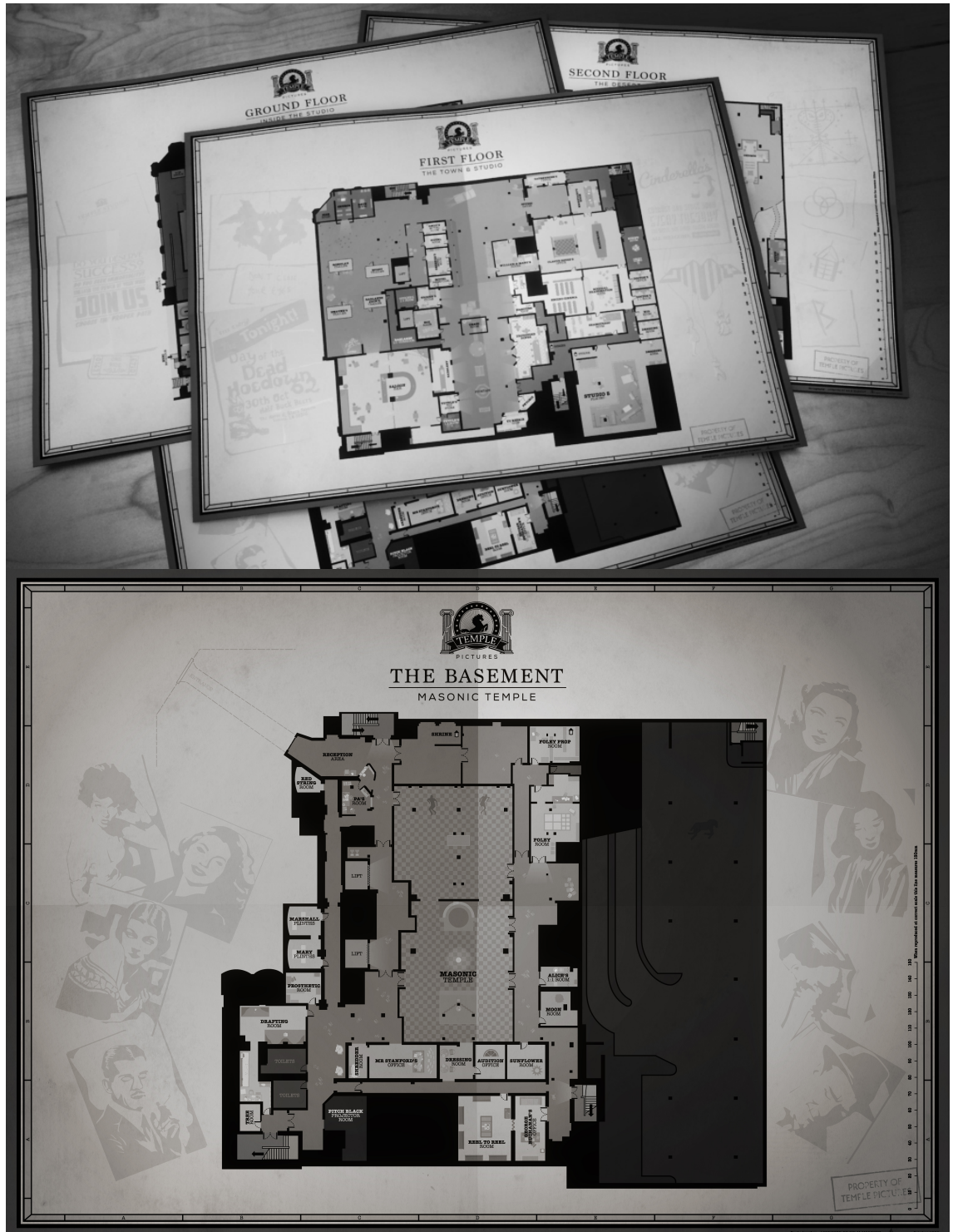
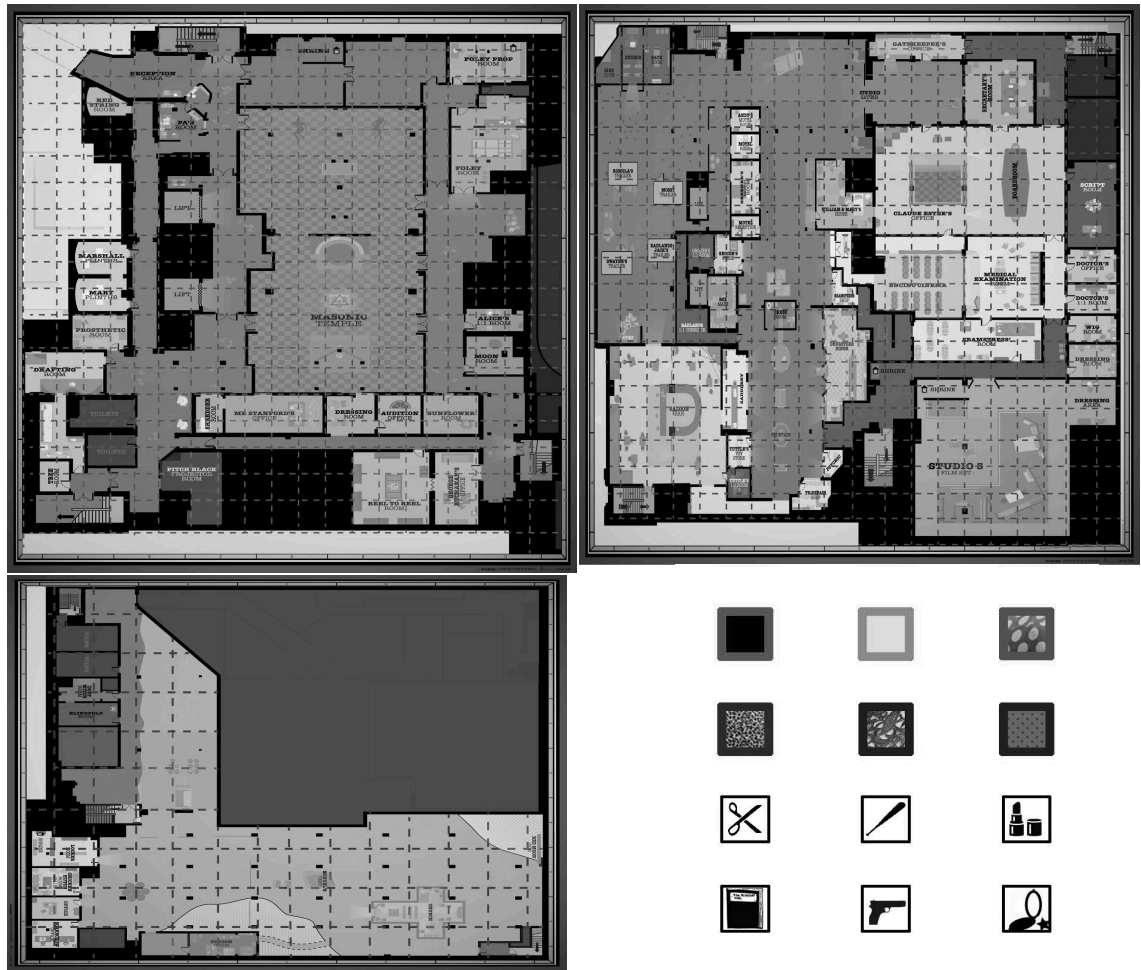







Figure A3.1: This set of maps was designed by Marcus Moresby in response to *The Drowned Man*, reconstructed from shared maps of the performance space in the ‘Spoiler’ fandom on Facebook. The company does not release their own plans of the set. The plans of all the floors open to the general public that were part of the main performance space are shown above, with the lower basement ‘Studio 8’ and top level design studio excluded, as they were not generally accessible (reproduced here with the permission of Marcus Moresby).

The Drowned Man board game, designed by Katy Joyce Naylor



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Instructions

Good evening, and welcome to Temple Studios! Tonight you will explore the Studios and uncover what really happened to George Buchanan.

Contents:

- Board
- 6 studio employee cards
- 6 weapon cards
- 9 location cards
- 7 victim cards (optional)
- 6 playing chips: Alice (blue lace), Claude (beige), PA Leopard print, Seamstress (white), Stanford (black), Wendy (blue & white polka dot)
- 6 weapon chips: Saneball bat, gun, PA's lipstick, scissors, script, Seamstress' makeup
- Script (print one per player)

You will also need two dice.

The board:

The board shows the ground floor of Temple Studios. Players can raise suspicions in the spaces coloured peach. Final accusations are made in the Opium Den. Stairwells can be used as a shortcut between diagonal corners of the board.

Starting positions:

- Alice: Birthday Tent
- Claude: Snow Room
- PA: Audition Room
- Seamstress: Bottom right stairwell
- Stanford: Psychic Room
- Wendy: Caravans

Players who start in a coloured space cannot raise a suspicion in that space or return to it during their first turn.

How to play:

Separate the cards into studio employees, locations and weapons. Take one card from each pile and without looking, place them face down to one side. Shuffle the remaining cards and deal them face down. Check the cards you have been dealt off your script.

Roll the dice. The player with the highest roll goes first.

Contd...

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Employees

Alice			
Claude			
P.A.			
Seamstress			
Stanford			
Wendy			

Locations

Birthday Text			
Caravans			
Dressing Rooms			
Delores' Room			
Pool			
Studio 3			
Studio 4			
Studio 8			
Woodchip Mound			

Weapons

Bat			
Lipstick			
Gun			
Makeup			
Scissors			
Script			

Victims

Conrad			
Delores			
Fool			
Frankie			
Lila			
Marshall			
Romola			



Figure A3.2: *The Drowned Man* board game, designed by Katy Joyce Naylor and published in the Facebook ‘Spoiler’ fandom, complete with game boards, tokens, game rules, clue card/script, location cards, suspect cards, victim cards and weapons cards (reproduced here with the permission of Katy Joyce Naylor).

Appendix 4: Social media data

The analysis of the social media fandom discourse is not included in the analyses that form the core of the research presented in this thesis. It was undertaken to gain insight into the mediated audience culture formed around Punchdrunk, and serves as a background to the question and discussion of transcendent vs. immanent subject-event relationships in relation to the sublime in the introductory chapter. The tables and figures included in appendix 4 are consequently not included in the body text of the thesis, and are intended to give additional background to the introductory discussion in chapter one.

The social media fandom discourse was primarily analysed manually, as there are no tools that at the time of this research can export data from groups that are not open to the public. The language used in the posts was also rich in metaphors, which contributed to making manual extraction the most productive method. The fandom community for *The Drowned Man* that I researched on Facebook ran the ‘Spoiler’ group during and after the end of the performance run. Due to the very large number of posts, I selected the sample from posts made between July 2014 and May 2015, from the final period of the production run until the group was closed for further contributions, and the community moved over to a broader interest group called *Punchdrunk Lovers*.

The sample was based on direct references to either *The Drowned Man* or *Sleep No More*, including references to symbols, storylines, or memories from these productions as well as games and other forms of artwork developed on the basis of such content, or to the meta-narrative of Punchdrunk as a company. Based on these criteria, the size of the sample I selected from the period was $n = 1,196$. The objective was to seek a measure of topics brought up for discussion, and a top-level engagement metric for these topics that distinguished between approval and participation. I therefore recorded the number of comments the posts in the sample received, but not the content of those comments (although I made notes when the comment thread was of particular interest). The file used for analysis is too large to include here, and is instead available, together with the full set of interview transcripts, on USB memory.

Discourse analysis of the Facebook ‘Spoiler’ posts revealed a pseudo-religious register in which the majority of fan activities and reflections fell. Within this, five nodes were identified for coding; references to ritualistic practices relating to the communal, references to sacrifice either in the form of symbolic blood rites or offerings in homage to the object of worship, references to omens in the form of the storyworld pervading on the real world, references to ephemerality and loss inspiring obsessive or worshipful behaviour, and references to the collection or acquisition of relics (i.e. items from the production in question) (fig. A4.1). Some posts contained references to more than one of the categories listed below, which is why the total percentage exceeds 100%. Community-building activities of a patterned nature,

including assistance extended to other fans wanting to participate in the activities around which the community was formed, fell under the category ‘Ritual’, while offerings of personal time and effort, as well as fan activities related to blood and body modification, were coded to the category ‘Sacrifice’. The ‘Omen’ category concerns posts referring to perceived incursions of the story world on real life in the form of signs and omens, as well as descriptions of dreams and premonitions. Wistful and nostalgic expressions of longing and loss, often associated with fragrance memories, were coded to the ‘Ephemerality’ category, and references to articles bought or otherwise obtained from the production, as well as the building of personal ‘altars’ were coded to the ‘Relics’ category.

Ritual	Sacrifice	Omen	Ephemerality	Relics
31.6%	23.2%	10.6%	21.8%	21.8%

Figure A4.1: Breakdown of references to pseudo-religious practices in the Facebook ‘Spoiler’ fan community for *The Drowned Man*. The given percentage number shows the proportion of posts of the sample with references to the categories listed.

Tumblr blogs were selected based on a keyword search for ‘Punchdrunk’, ‘Sleep No More’ and ‘The Drowned Man’ (fig. A4.2). To gather Tumblr blog data, I trialled import.io to extract and export content data, and subsequently cleaned it up in Excel. However, as the total number of fan blogs included in the sample that was selected according to the criteria above counted 40 in total, I eventually settled on manual analysis also of this sample, as it allowed the most accurate context-specificity.

The character of Tumblr blogs was more diverse than the ‘Spoiler’ Facebook community: the platform appears to facilitate a more idiosyncratic authorial voice than Facebook, which seems to encourage community-based activities. The authorial voice in the sample (n=40) ranged from territorial and didactic, ‘faithful devotee’ and reflective or pensive, to meticulous and whimsical (fig. A4.2). Reimaginings of Punchdrunk’s work as visual artwork, often shared to other fans via Facebook, features relatively strongly, as do detailed accounts of personal experiences from often repeat visits to favourite productions. In comparison with primarily informative accounts of the story loops (thedustwitch.com, 2015), the Tumblr blogs describing story loops often take a more interpretative approach and focus on personal experience, with little evidence of the communal or crowdsourcing approach that dominates the archival practices in the Facebook ‘Spoiler’ group for *The Drowned Man*.

Name	General interest	URL	Main format	2nd format	Fandom activity	Writer voice	FB
"Blood Will Have Blood, They Say"	SNM	http://bloodwillhavebloodtheysay.tumblr.com/	Self-expression	Q&A/advice	Self-appointed expert	Territorial, didactic	Yes
All Good Things... Bad Things...	TDM	http://riverthecruises.tumblr.com/	Detailed descriptive essays			Devotee	
Shutters Open	SNM, TDM	http://shuttersopen.tumblr.com/	Documentation of attendance	Q&A/advice	The Drowned Lego	Grandiose	Yes
A Jinx of Ink	Theatre, poetry, art	http://ajinxofink.tumblr.com/	Reblogging inspirations	Diary posts, call-outs		Wistful, whimsical	
Arfman	Theatre, art, photography	http://arfman.tumblr.com/	SNM/TDM artwork	Photography	Fan art	Faithful	Yes
The Drowned Man and Beyond	TDM, SNM, PD	http://bloodsanddandy.tumblr.com/	Descriptive essays	Reblogging fan posts	Commenting	Commentator	Yes
Untitled	TDM	http://redboudoirgirl.tumblr.com/	Reblogging fan posts	Documenting choreography		Wistful	Yes
Fraggin' Aardvark	Movies, TDM	http://fraggin'aardvark.tumblr.com/	Detailed descriptive essays	Documenting loops	FB loops file	Enthusiastic, authorial	Yes
Drink the Halo	SNM, TDM	http://drinkthehalo.tumblr.com/	Detailed descriptive essays	Documentary photography	Gathering resources	Meticulous, generous	
Serpentunderit	Theatre, PD	http://serpentunderit.tumblr.com/	Descriptive essays	Witty commentary		Enthusiastic	
Multum Olim	TDM, SNM, PD	http://multumolim.tumblr.com/	SNM/TDM artwork	Reblogging other PD media		Shy, intense	Yes
Pursuit of Happenstance	SNM, TDM	http://pursuitofhappenstance.tumblr.com/	Descriptive posts	Reblogging other PD media		Enthusiastic	Yes
Unknown Title of a Life	Performance, SNM, TDM	http://dademurfe.tumblr.com/	Self-expression	Reblogging other PD media		Expressive	
Delirium Dog	Sound art, PD	http://deliriumdog.tumblr.com/	Self-expression	Descriptive essays		Confident, expressive	
A Gold Bug Variation	PD, TDM, SNM	http://classicgoldbug.tumblr.com/	Expressive essays	Interviews	Journalistic writing	Journalistic, privileged	Yes
What Should Punchdrunk Call Me? Scrapbook	PD, TDM, SNM	http://whatshouldpunchdrunkcallme.tumblr.com/	Witty commentary	Gifs	Gifs	Witty, appreciative	
Back to Manderley	SNM	http://paisesleysweets.tumblr.com/	Critique	Fan posts	Self-appointed expert	Loyal, stern, 'von oben'	
On Tuesday Last	TDM	http://on-tuesday-last.tumblr.com/	Privileged explanation	Impersonating characters		Holding court	
Cam the Librarian	TDM	http://camthelibrarian.tumblr.com/	Reblogging fan posts			Enthusiastic	
"The Bloody Business"	SNM	http://thebloodybusiness.tumblr.com/	Detailed, expressive essays	Descriptive essays		Reflective, wistful	Yes
			Commentary	Q&A/advice	Self-appointed expert	Dilettante, connaisseur	

Veto por la Sombrita	SNM	http://gobytheshadow.tumblr.com/	Documentary photos	Reblogging fan posts	Discreet
A Deed Without a Name	SNM	http://deed-without-name.tumblr.com/	Reflective documentation	Impersonating characters	Poetic, authorial
Throw the Rose	TDM	http://throwtherose.tumblr.com/	Descriptive essays	Music, video, photography	Expressive, authorial
Rotten Wood and Wilted Sunflowers	SNM	http://rottenwoodandwiltedsunflowers.tumblr.com/	Descriptive posts	Q&A/advice	Authorial, didactic
Utopia	SNM	http://errrrtythebabber.tumblr.com/	SNM artwork	Reblogging inspirations	Ethereal, privileged
The Chad Chronicles	TDM, SNM, PD	http://chadchronicles.tumblr.com/	Descriptive posts	Documentary photography	Savoir-faire, confident
At the Gates Guarded by Horses	TDM	http://templestudios.tumblr.com/	TDM fan artwork	Descriptive essays	Well-informed, generous
Sleep No More Sketches	SNM	http://snmsketches.tumblr.com/	SNM/Gallow Green events posts	SNM/TDM artwork	Expressive, personal
Actually Scorched	SNM, TDM	http://actuallyscorched.tumblr.com/	Self-expression	Photography	Crude, knowing
That Perilous Stuff	SNM, TDM	http://thatperilousstuff.tumblr.com/	Descriptive posts	PD news	Well-informed, knowing
The Fool's Loop	TDM, SNM	http://thefoolsloop.tumblr.com/	Expressive essays	Descriptive essays	Amorous, feverish
Such Stuff That Dreams Are Made On	TDM, SNM, PD	http://badlydrawndrownedman.tumblr.com/	In-group participation	Q&A/advice	Cliquey, informal
Totally True Facts About Sleep No More	SNM	http://truefactsaboutsleeptomore.tumblr.com/	Made-up obscure SNM fan facts		Oblique obsession
Living Inside a Dream	TDM	http://ahollywoodtable.tumblr.com/	Photo documentation	Descriptive posts	Worshipful
The Drowned Man Contraband	SNM, TDM	http://priceyc.tumblr.com/	Photo documentation	Clandestine photography	Clandestine, faithful
Pricey C (hosting TDM Contraband)	SNM, TDM	http://priceyc.tumblr.com/	Descriptive posts	Q&A/advice	Charity calls to support PD
"It's Bright Being a Star"	SNM, TDM	http://brightbeingastar.tumblr.com/	Descriptive posts	Photography	Faithful, enthusiastic
Read With Joy	SNM	http://readwithjoy.tumblr.com/	Expressive posts	Reblogging fan posts	Expressive, emotional
When Will Theta Notice Me	TDM	http://fayegreener.tumblr.com/	Photo documentation	Reblogging inspirations	Impersonating characters

Figure A4.2: Punchdrunk blogs on Tumblr, with general topics (PD), content related to *Sleep No More* (SNM), or *The Drowned Man* (TDM). Primary and secondary formats are listed, with notes on specialised fandom activity, the authorial voice adopted by the writer, and cross-platform participation.

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